

<b>SOLICITATION, OFFER AND AWARD</b>			1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING DO-A3	PAGE OF PAGES 1 78	
2. CONTRACT NO.		3. SOLICITATION NO. N65540-03-R-0014		4. TYPE OF SOLICITATION [ ] SEALED BID (IFB) [X] NEGOTIATED (RFP)	5. DATE ISSUED 02 Dec 2002	6. REQUISITION/PURCHASE NO. 28043546	
7. ISSUED BY NAVAL SURFACE WARFARE CENTER, CARDEROCK CODE 3351, C. D'ALONZO-FERRARO 5001 SOUTH BROAD ST. PHILADELPHIA PA 19112-1403			CODE N65540	8. ADDRESS OFFER TO (If other than Item 7)  <b>See Item 7</b>		CODE	TEL: FAX:
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".							
<b>SOLICITATION</b>							
9. Sealed offers in original and <u>3</u> copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in <u>5001 S. Broad St., Phila., PA</u> until <u>16 00</u> local time <u>02 Jan 2003</u> (Hour) (Date)							
CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.							
10. FOR INFORMATION CALL:		A. NAME CRYSTAL D'ALONZO-FERRARO		B. TELEPHONE (Include area code)(NO COLLECT CALLS) 215-897-7063		C. E-MAIL ADDRESS dalonzocf@nswccd.navy.mil	
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<b>OFFER (Must be fully completed by offeror)</b>							
NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.							
12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.							
13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)							
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):				AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
15A. NAME AND ADDRESS OF OFFEROR		CODE	FACILITY		16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)		
15B. TELEPHONE NO (Include area code)		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>			17. SIGNATURE		18. OFFER DATE
<b>AWARD (To be completed by Government)</b>							
19. ACCEPTED AS TO ITEMS NUMBERED		20. AMOUNT		21. ACCOUNTING AND APPROPRIATION			
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )				23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)		ITEM	
24. ADMINISTERED BY (If other than Item 7)		CODE	25. PAYMENT WILL BE MADE BY		CODE		
26. NAME OF CONTRACTING OFFICER (Type or print)				27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)		28. AWARD DATE	

**IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.**

## SECTION B Supplies or Services and Prices

## ITEM NO    SUPPLIES/SERVICES

0001

Electric Valve Operator (EVO) Assembly, 8 Inch  
in accordance with the attached Performance Specification.

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0001AA	Same as Item 0001 To be ordered within 365 days after date of contract	27	Each		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0001AB	Same as Item 0001, To be ordered within 366 days through 731 days after date of contract.	81	Each		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0001AC	Same as Item 0001, To be ordered within 732 days through 1097 days after date of contract.	81	Each		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0001AD	Same as Item 0001, To be ordered within 1098 days through 1462 days after date of contract.	27	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0001AE	Same as Item 0001, To be ordered within 1463 days through 1827 days after date of contract.	27	EA		

ITEM NO	SUPPLIES/SERVICES
0002	Electric Valve Operator (EVO), 6 Inch

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0002AA	Same as Item 0002, To be ordered within 365 days after date of contract	13	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0002AB	Same as Item 0002 To be ordered within 366 days through 731 days after date of contract	39	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0002AC	Same as Item 0002 To be ordered within 732 days through 1097 days after date of contract.	39	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0002AD	Same as Item 0002 To be ordered within 1098 days through 1462 days after date of contract	13	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0002AE	Same as Item 0002 To be ordered within 1463 days through 1827 days after date of contract	13.00	EA		

ITEM NO	SUPPLIES/SERVICES
0003	Electric Valve Operator (EVO) 5 Inch

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0003AA	Same as Item 0003 To be ordered within 365 days after date of contract	140	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0003AB	Same as Item 0003 To be ordered within 366 days through 731 days after date of contract.	420	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0003AC	Same as Item 0003 To be ordered within 732 days through 1097 days after date of contract.	420	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0003AD	Same as Item 0003 To be ordered within 1098 days through 1462 days after date of contract	140	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0003AE	Same as Item 0003 To be ordered within 1463 through 1827 days after date of contract.	140	EA		

ITEM NO	SUPPLIES/SERVICES
0004	Electric Valve Operator (EVO), 4 Inch

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0004AA	Same as Item 0004 To be ordered within 366 through 731 days after date of contract.	117	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0004AB	Same as Item 0004 To be ordered within 366 through 732 days after date of contract.	351	EA		

ITEM NO	SUPPLIES/SERVICES	ESIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0004AC	Same as Item 0004 To be ordered within 732 days through 1097 days after date of contract.	351	EA		

ITEM NO	SUPPLIES/SERVICES	ESIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0004AD	Same as Item 0004 To be ordered within 1098 days through 1462 days after date of contract.	117	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0004AE	Same as Item 0004 To be ordered within 1463 days through 1827 days after date of contract.	117	EA		

ITEM NO	SUPPLIES/SERVICES
0005	Electric Valve Operator (EVO), 3 Inch

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0005AA	Same as Item 0005 To be ordered within 365 days after date of contract	12	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0005AB	Same as Item 0005 To be ordered within 366 days through 731 days after date of contract.	36	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0005AC	Same as Item 0005 To be ordered within 732 days through 1097 days after date of contract.	36	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0005AD	Same as Item 0005 To be ordered within 1098 days through 1462 days after date of contract.	12	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0005AE	Same as Item 0005 To be ordered within 1463 days through 1827days after date of contract.	12	EA		

ITEM NO	SUPPLIES/SERVICES
0006	Electric Valve Operator (EVO), 2 Inch

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0006AA	Same as Item 0006 To be ordered within 365 days after date of contract.	121	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0006AB	Same as Item 0006 To be ordered within 366 days through 731 days after date of contract.	363	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0006AC	Same as Item 0006 To be ordered within 732 days through 1097 days after date of contract.	363	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0006AD	Same as Item 0006 To be ordered within 1098 days through 1463 days after date of contract.	121	EA		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0006AE	Same as Item 0006 To be ordered within 1463 days through 1827 days after date of contract.	121	EA		

ITEM NO	SUPPLIES/SERVICES
0007	Associated Technical Data for Items 0001 through 0006

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0007AA	Conformance Inspection/Production Test Report, Data Item No. A001	1	Lot	NSP*	NSP*

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0007AB	Commercial Off the Shelf (COTS) Manual Data Item No. A002	1	Lot	NSP*	NSP*

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0008	Same as Item 0001AA First Article Sample, Contractor Testing	1.00	EA		

ITEM NO	SUPPLIES/SERVICES
0009	Associated Technical Data for Item 0008AA

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0009AA	First Article Test Procedures Data Item A003	1	Lot	NSP*	NSP*

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0009AB	First Article Test Report Data Item No. A004	1	Lot	NSP*	NSP*

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0010	Same as Item 0006AA First Article Sample, Contractor Testing	1.00	EA		

ITEM NO	SUPPLIES/SERVICES
0011	Technical Data for Item 0010

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0011AA	First Article Test Procedure Data Item No. A003	1	Lot	NSP*	NSP*

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0011AB	First Article Test Report Data Item No. A004	1	Lot	NSP*	NSP*

ITEM NO	SUPPLIES/SERVICES
0012	Technical Data for Items 0001 through 0006

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AA	Engineering Drawings Data Item No. A005, A005A, A006	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AB	Design Change Notice Data Item No. A006	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AC	Provisioning Parts List Data Item No. A007	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AD	Provisioning Conference(s) Data Item No. A008	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AE	Provisioning Conference(s) Minutes Data Item No. A009	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AF	Statement of Prior Submission Data Item No. A010	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0012AG	Engineering Data for Provisioning of Interim Support Data, Data Item No. A011	1.00	Lot		

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0013	Same as Item 0003 First Article Sample, Government Testing	1	EA		

ITEM NO	SUPPLIES/SERVICES
0014	Technical Data for Item 0013

ITEM NO	SUPPLIES/SERVICES	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ESTIMATED AMOUNT
0014AA	Conformance Inspection Production Test Report, Data Item A001	1.00	Lot	NSP*	NSP*

This solicitation covers the establishment of a firm-fixed price requirements contract on behalf of the Carderock Division, Naval Surface Warfare Center, (CDNSWC), Philadelphia with an ordering period of 1827 days after date of contract. Items 0007AA, 0007AB, 0009AA, 0009AB, 0011AA, 0011AB, 0012AA through 0012AG are designated as "Not Separately Priced" (NSP.) The offeror is requested to include the price of Items 0007AA, and 0007AB if any, in the price for Items 0001 through 0006 and the price of Items 0009AA, 0009AB, 0011AA and 0011AB if any, in the price for Items 0008 and 0010 and the price of Item 0014AA if any, in the price for Item 0013.

As stated in Section L of this solicitation, offerors are required to submit a Technical Proposal as part of any offer. Failure to submit a Technical Proposal will result in rejection of an offer. The Technical Proposal shall contain information on Design, Corporate Experience and Past Performance. As stated in Section M, the Government intends to make a single award to the low price technically acceptable offeror. Technical acceptability shall be determined based on an evaluation of each offeror's Design, Corporate Experience and Past Performance.

This solicitation provides for First Article Samples under Items 0008 and 0010 for testing by the contractor and for the furnishing of a First Article Sample under Item 0013 for testing by the Government. Refer to Clause 52.209-3 in Section I for information on contractor testing of the First Article Samples and to Clause 52.209-4 in Section I for information on Government First Article Testing.

As stated above, this solicitation contemplates award of a firm-fixed price requirements contract. Refer to Clauses 52.216-18, 52.216-19 and 52.216-21 in Section I. The quantities shown in Section B are estimates only and are not a representation such quantities will actually be ordered. All purchases made under any resulting contract will be made by the issuance of delivery orders within the ordering periods specified in Section B.

## SECTION C Descriptions and Specifications

# **Performance Specification**

## **JP-5 System Electric Valve Operator (EVO)**

### **Assembly For Use on Existing Tank Manifolds**

#### **1.0 SCOPE**

The EVO Assembly is capable of opening and closing from prompts directly from the control console, via the console operator or from tank level data signals. This performance specification provides the requirements for solicitation of new EVO Assembly in order to replace existing EVO units and manifold bonnet assemblies used for JP-5 tank manifolds.

The EVO Assembly consists of a solenoid operated valve actuator with an integral stem and manifold valve disc. The EVO Assembly stipulated by this performance specification is intended to replace existing JP-5 system tank manifold EVO, the manifold valve yoke, packing gland, packing, manifold valve bonnet, manifold valve stem and manifold valve disk.

#### **1.1 Technical Data Package**

The contractor shall use this performance specification to produce an EVO Assembly meeting all of the technical and performance requirements herein, to include First Article Testing, software requirements and packaging.

#### **1.2 First Article Testing**

The resulting contract will provide for the First Article Samples covered by Items 0008 and 0010 to be tested by the contractor in accordance with the requirements set forth in paragraph 4.3 herein. The contractor shall submit a First Article Test Procedure for the Samples covered by Items 0008 and 0010 under Items 0009AA and 0011AA respectively. The resulting contract will also provide for one First Article Sample to be Government tested as set forth in paragraph 4.9 herein.

#### **2.0 APPLICABLE DOCUMENTS**

##### **2.1 General**

The following documents shall form a part of this performance specification document to the extent specified herein.

##### **2.2 Government Documents**

##### **2.2.1 Specifications, Standards, and Handbooks**

The following specifications, standards, and handbooks form a part of this performance specification to the extent specified herein.

#### **SPECIFICATIONS**

##### **MILITARY**

MIL-S-901D dated 17 March 1989 – Shock Tests, H.I. (High Impact); Shipboard Machinery, Equipment and Systems, Requirements for  
 MIL-DTL-1222J dated 8 December 2000 – Studs, Bolts, Screws, and Nuts For Applications Where a High Degree of Reliability is Required, General Specification For  
 MIL-E-2036D(SH) dated 10 March 1988, with Notice 2 dated 29 October 2001 – Enclosures for Electric and Electronic Equipment  
 MIL-E-16298D dated 7 March 1989 – Electric Machines Having Rotating Parts, Accessories and Associated Support Items: Packaging of  
 MIL-C-24643/20D dated 22 November 1994 – Cables, Electrical, 1000 Volts, Type LS7SGU (Including Variation LS7SGA)  
 MIL-DTL-5624T dated 18 September 1998 – Turbine Fuel, Aviation, Grades JP-4, JP-5 and JP-5/JP-8 ST  
 MIL-DTL-24784/4B(SH) dated 15 February 2002 – Commercial Off-The-Shelf (COTS) Equipment Manual Requirements  
 MIL-DTL-31000B dated 14 December 2001 – Technical Data Packages (TDPs)

## **STANDARDS**

MIL-STD-167-1 dated 1 May 1974 – Mechanical Vibrations of Shipboard Equipment (Type I, Environmental and Type II Internally Excited)  
 MIL-STD-461E dated 20 August 1999 – Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment  
 MIL-STD-108E dated 4 August 1966, with Notice 2 dated 8 August 1990, Definitions of and Basic Requirements for Enclosures for Electric and Electronic Equipment  
 MIL-STD-1399(NAVY), Section 300A dated 13 October 1997 – Interface Standard for Shipboard Systems, Section 300A, Electric Power, Alternating Current  
 MIL-STD-202G dated 8 February 2002, Test Method Standard, Electronic and Electrical Component Parts  
 MIL-STD-22D dated 25 May 1979, with Notice 3 dated 21 March 1991 – Welded Joint Design  
 MIL-STD-798 dated 27 November 1968 – Nondestructive Testing, Welding, Quality Control, Material Control and Identification and Hi-Shock Test Requirements for Piping System Components for Naval Shipboard Use

### **2.2.2 Other Government Documents, Drawings, and Publications**

The following other Government documents, drawings, and publications form a part of this performance specification to the extent specified herein.

## **PUBLICATIONS**

### **NAVAL SEA SYSTEMS COMMAND (NAVSEA)**

S9074-AR-GIB-010/278 – Requirements for Fabrication Welding and Inspection and Casting Inspection and Repair for Machinery, Piping, and Pressure Vessels  
 S9074-AQ-GIB-010/248 – Welding and Brazing Procedure and Performance Qualification  
 T9074-AS-GIB-010/271 – Requirements for Nondestructive Testing Methods

### **FEDERAL SPECIFICATION**

QQ-N-286G dated 7 December 2000, Nickel-Copper-Aluminum Alloy, Wrought (UNS N05500)  
 FED-STD-H28A dated 28 December 1994, with Notice 1 dated 10 September 2001, Screw-Thread Standards for Federal Services

## **MISCELLANEOUS**

NAVSEA Technical Specification 9090-1500, Policies and Procedures, Provisioning, Allowance and Fitting Out Support Manual, Chapter 4 (available at <http://www.nslc.fms.navy.mil/TechLog/PAFOS/PAFOS0.htm>)

NAVSUP P-719 dated 6 June 1999, Guide of the Assignment, Application and Use of Source, Maintenance and Recoverability Codes

## **2.3 Non-Government Publications**

The following documents form a part of this performance specification to the extent specified herein.

### **AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**

ANSI/IEEE 315A dated 24 December 1986 – Graphic Symbols for Electrical and Electronics Diagrams

### **AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)**

Y14.1-1995 – Decimal Inch Drawing Sheet Size and Format

Y14.2M-1992 – Line Convention and Lettering

Y14.3M-1994 – Multiview and Sectional Drawings

Y14.5M-1994 – Dimensioning and Tolerancing

### **MANUFACTURER'S STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY**

MSS-SP61 dated 1 January 1999 – Pressure Testing of Steel Valves

### **AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)**

ASTM F1166 – Human Engineering Design for Marine Systems, Equipment, and Facilities

### **SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)**

SAE-AMS-C-6183 dated 1 July 1998, Cork and Rubber Composition Sheet, for Aromatic Fuel and Oil Resistant Gaskets

## **2.4 Order of Precedence**

In the event of a conflict between the text of this performance specification and the references cited herein (except for related associated specifications, or specification sheets), the text of this performance specification takes precedence. Nothing in this performance specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

## **3.0 DETAIL REQUIREMENTS**

### **3.1 Characteristics**

Each EVO Assembly shall be 110 VAC powered. The EVO Assembly shall return a signal to the control console indicating the position of the valve. The control console may be a computer-based console or push button, hand switch type control console. The valve control and position indication shall be compatible with either type of control console without modification to either style of control console. The EVO Assembly shall be of a design such that it contains a family of sizes ranging from 2" to 8" for valve manifolds. The EVO Assembly will be designed to mount directly to the valve manifold body. This design promulgates removal of the existing valve yoke, packing gland, packing, valve bonnet, valve stem, and valve disk. Each replacement EVO Assembly shall include the valve actuator and valve disc in a configuration compatible with the existing JP-5 valve manifold arrangements, such that the new EVO Assembly replaces the aforementioned removed valve manifold components.

The EVO Assembly sizing shall be defined as follows, with the required valve disc size found on the specified Navy drawing:

EVO Assembly	Manifold Valve Size	Manifold Disk Per Navy Drawing
2"	2"	508-4325677
3"	3"	504-4326478
4"	4"	508-4325675
5"	5"	508-4325674
6"	6"	504-4326578
8"	8"	504-4326344

Specific existing JP-5 manifolds may include the ability to control seawater between tanks during ballast/deballast operations. The flow through the valve manifold may be in either an entry or exit direction. The EVO Assembly shall be capable of opening or closing the valve when flow is in either direction. The EVO Assembly shall be capable of all valve operations with a pressure differential in either direction or with no pressure differential across the entire valve manifold assembly. A manual override feature will be provided for manual operation of the EVO Assembly. Manual operation of the EVO Assembly will not exceed one minute for actuation by shipboard personnel for the EVO Assembly size ranges of 2” through 5” to fully open or fully shut the valve. Manual operation of the EVO Assembly will not exceed two minutes for actuation by shipboard personnel for the EVO Assembly size ranges of 6” through 8” to fully open or fully shut the valve. The EVO Assembly design shall be of a sealed, with no valve stem packing, design (hermetically) to promote avoidance of electrical (e.g. shorts) or mechanical (e.g. corrosion) failures in a seawater environment whether by saltwater atmospheric conditions, or by direct seawater spray and humidity. The EVO Assembly shall be designed such that future implementation of smart valve technology via circuit, or “smart”, cards can be easily implemented with minimal design changes that does not affect the overall size envelope. Local and remote valve position indication shall be provided. Local valve position indication shall contain a mechanical indication, at a minimum. Electrical indication may also be provided, in addition to the required mechanical indication. The local mechanical valve position indicator, located on the EVO Assembly, shall be provided requiring no electrical power for actuation. If provided, the local electrical valve position indicator shall utilize the existing power source, used for the EVO Assembly in its entirety for all functions, and shall not require any additional power source.

3.1.1 Ship Interface Connections

The EVO Assembly shall mate directly to the valve manifold body, in the specific size ranges. The flange design and bolt pattern shall be identical to the existing valve manifold body. The bolting shall be nickel copper in accordance with QQ-N-286G and conform to MIL-DTL-1222J. The gasket material used at the mechanical joint between the EVO Assembly and the valve manifold body, shall be the responsibility of the installing activity. The contractor shall provide all equipment/fittings or other incidentals necessary for installation of the entire EVO Assembly. The current EVO units require 440 VAC, 110 VAC and 28 VDC. The new EVO Assembly shall require the use of 110 VAC only. The EVO Assembly shall perform all functions with maximum operating amperage of 2 amperes. If cabling is required by the contract, as an item to be provided by the Supplier, then cabling for electrical power transmission shall conform to the requirements of MIL-C-24643/20D.

The EVO Assembly shall interface with the following shipboard interface connections and be within the following space envelopes:

EVO Assembly	Manifold Valve Size	Manifold Disk Per Navy Drawing	Total Space Envelope (Height X Width X Depth)
2"	2"	508-4325677	28.5"H x 7.5"W x 19"D
3"	3"	504-4326478	28.5"H x 7.5"W x 19"D
4"	4"	508-4325675	33"H x 11"W x 19"D
5"	5"	508-4325674	33"H x 12.5" W x 19" D
6"	6"	504-4326578	31"H x 13.5"W x 19"D
8"	8"	504-4326344	31"H x 16.5"W x 19"D

### 3.1.2 Smart Valve Technologies

The EVO Assembly shall be designed, such that, space considerations are provided for adding future implementation of smart valve technology via circuit, or “smart”, cards for upgrading to a field-bus controlled system with minimal design changes that do not affect the overall size envelope.

### 3.1.3 Shelf Life

Shelf life is the period of time from delivery to the Navy until system start-up. Shelf life capability of the EVO Assembly shall be ten years. Following the shelf life period, each EVO Assembly shall have the specified operational service life without component or part replacement, adjustment or maintenance action, see paragraph 3.3.3.

### 3.1.4 Human Engineering

The EVO Assembly design shall incorporate the human engineering requirements of ASTM F1166.

### 3.1.5 Safety

The EVO Assembly shall be designed so as to be free of personnel hazards. All safety features shall be such that their functions cannot be inadvertently degraded during operation, storage, shipping, handling, or maintenance. All parts and components of the EVO Assembly shall be free of sharp edges, burrs, protruding surfaces and other harmful extraneous material. Means shall be provided to insure against damage to wires and cables from contact with rough or irregular surfaces and sharp edges.

## 3.2 Qualification

EVO Assemblies furnished under this performance specification shall be products that are manufactured in accordance with the inspection requirements in paragraph 3.2.1 (for first unit of the model series) and 3.2.2.

### 3.2.1 First Article Testing

A quantity of one each 8 inch and one each 2 inch EVO Assembly covered by Items 0008 and 0010 respectively shall be subjected to First Article testing and inspection, including the endurance test, along with the other tests and requirements as specified in paragraph 4.3 by the contractor.

### **3.2.1.1 Endurance Testing and Shipboard Evaluation**

A quantity of one each 5 inch EVO Assembly covered by Item 0013 shall be subjected to a shipboard test conducted by the Government in accordance with paragraph 4.9. Prior to delivery, the 5 inch EVO Assembly shall be subjected to Conformance Inspection/Production Testing in accordance with paragraph 4.4 and to the Endurance Test in accordance with paragraph 4.14.

### **3.2.2 Conformance Inspection/Production Test**

EVO Assemblies furnished under this performance specification shall be subjected to quality conformance inspection and production testing in accordance with paragraph 4.4.

### **3.2.3 Shock Testing**

The EVO Assembly shall conform to grade A shock requirements in MIL-S-901D for class 1, hull mounted equipment in accordance with paragraph 4.15.

### **3.2.4 Vibration Testing**

The EVO Assembly shall meet the requirements of MIL-STD-167-1 for the frequency range of 4 to 25 Hz in accordance with paragraph 4.16.

### **3.2.5 Configuration Changes**

Subsequent to first article approval, any modifications to an EVO Assembly may be a basis for repeating all or portions of first article tests (see paragraph 3.2.1) for the entire unit or specific component(s). This includes any modification to install “smart” valve technology not part of the original design. At a minimum, shock and vibration testing may be required.

## **3.3 Performance Requirements**

### **3.3.1 Capabilities**

When operating at specified environmental conditions (see paragraph 3.3.7) and within the specified pressure limits (see paragraph 3.3.8), the EVO Assembly shall be capable of negating fluid flow (through valve closure) or permitting fluid flow (through valve opening) upon actuation from the control console. Actuation from the control console may be from operator interface or signal response from a tank level indicating system.

### **3.3.2 Fluid Media**

The EVO Assembly shall perform all functions and capabilities when the liquid is JP-5, per MIL-DTL-5624T, seawater, freshwater, or any combination of the three liquids.

### **3.3.3 Operational Service Life**

The EVO Assembly shall perform without failure to a minimum of 100,000 cycles for electrical operation and a minimum of 1,000 cycles for manual operation. One cycle shall be considered as one opening and one closing operation.

### **3.3.4 Failure Positioning**

When electrical power is lost or disrupted, the EVO Assembly shall assume a fail position of valve closure. Local valve indication shall indicate the valve being closed and continue to provide valve closure indication

throughout the loss of power. Upon restoration of power, valve must remain in the closed position until shipboard personnel actuation, remote or local, returns the valve to its desired position for system operations.

### **3.3.5 Surface Temperature**

The EVO Assembly exterior shall not exceed a surface temperature of 140°F under any operational circumstances, when the ambient temperature is no more than 122°F.

### **3.3.6 Valve Flow Coefficient ( $C_v$ )**

The EVO Assembly design shall maintain the same, existing valve flow coefficient ( $C_v$ ) for the manifold valve.

### **3.3.7 Environmental Conditions**

Each EVO Assembly shall be designed for operation at ambient temperatures between minus 20 degrees F and 122 degrees F. Each EVO Assembly shall be designed for operation at any ambient pressure up to 14.7 PSIA +/- 1 PSIA. Each EVO Assembly shall be designed for operation at any relative humidity from 0 to 100 percent. The EVO Assembly shall be designed for operation in a seawater environment whether by any saltwater atmospheric conditions, or by direct seawater spray.

### **3.3.8 Operating Pressure**

Each EVO Assembly shall be designed for a system maximum pressure of 250 PSIG. Each EVO Assembly shall be designed for a maximum system, forward (tank filling operation) differential pressure of 250 PSIG. Each EVO Assembly shall be designed for a maximum system, reverse differential pressure of 28 PSIG. Each EVO Assembly shall be designed for a maximum system, suction (tank suction operation) differential pressure equivalent to 17" H<sub>2</sub>O.

#### **3.3.8.1 Hydrostatic Test**

The EVO Assembly shall be subjected to a hydrostatic test to 300 PSIG. Testing requirements are specified in paragraph 4.7.

## **3.4 Operation**

### **3.4.1 EVO and Valve Operation**

The EVO Assembly provide complete valve closure or opening functions in a time period greater than 5 seconds, but less than 30 seconds, regardless of the valve size. The EVO Assembly be capable of continuous duty cycling at a rate of no greater than one cycle per minute. The EVO Assembly, designed with the actuator and valve disc for the existing manifold, shall conform to Manufacturers Standardization Society Standard Practice, MSS-SP61, for allowable seat leakage.

## **3.5 Mechanical Design Requirements**

Each EVO Assembly shall be a singular modular unit including the electrical enclosure, which shall be used as a direct replacement for the currently installed JP-5 manifold actuator and valve disc. Each EVO Assembly shall be bolted to its respective manifold within the available height, width and depth space envelope, utilizing existing electrical connections for power and position indication. **Mechanical interface connections and space envelopes shall conform to the specifications outlined in paragraphs 3.1 and 3.1.1.** No additional foundations shall be required nor support struts for the installation of the new EVO Assembly. The EVO Assembly shall be subdivided into modules to facilitate transport within the ship for initial installation. Also, the module design shall facilitate ease of troubleshooting and valve repair in the event of any in-service failures. As an assembly, the EVO Assembly shall be hermetically sealed, requiring no valve stem packing. As addressed in paragraph 3.1, the EVO Assembly shall replace following existing components: (1) valve yoke, (2) packing gland, (3) packing, (4) valve bonnet, (5) valve

stem, and (6) valve disk. A hand wheel shall be installed, integral with the EVO Assembly, to permit local operation of the valve without electrical power.

### 3.5.1 Valve Design

The valve configuration is considered a guided globe type valve. Allowable seat leakage shall conform to MSS-SP61. The valve disk design for the guided globe shall be removable and re-lappable.

### 3.5.2 Mechanical Interfaces

The EVO Assembly shall be mounted to the existing manifold via a bolted flange. Mechanical interface connections and space envelopes shall conform to the specifications outlined in paragraphs 3.1 and 3.1.1. The installing activity shall supply the gasket material for the mechanical joint. The gasket shall be Buna-N and Cork, per SAE-AMS-C-6183. The installing activity shall furnish new bolting or studs used for the installation of the EVO assembly. The bolting used for the mechanical connection shall conform to MIL-DTL-1222J. The material for the bolting shall be a nickel-copper-aluminum alloy per QQ-N-286G. Threads shall conform to FED-STD-H28A.

### 3.5.3 Manual Override of EVO

A hand wheel driven, rising stem actuator shall be provided with closing and opening direction indicated by arrows. The override shall open the valve against any EVO Assembly provided force (such as spring loaded mechanisms) with or without any pressure differential across the valve in either direction. Failure of any electrical components shall not prevent the manual actuation of the valve. Manual operation of the EVO Assembly will not exceed one minute for actuation by shipboard personnel for the EVO Assembly size ranges of 2" through 5" to fully open or fully shut the valve. Manual operation of the EVO Assembly will not exceed two minutes for actuation by shipboard personnel for the EVO Assembly size ranges of 6" through 8" to fully open or fully shut the valve.

### 3.5.4 General Mechanical Requirements

The EVO Assembly shall permit installation in any angular orientation from 0 to 45 degrees from vertical without performance deviations. Where known shipboard installations require angular orientations greater than 45 degrees from vertical, the Supplier must be informed to insure the EVO Assembly shall perform without performance deviations. The envelope size and weight of a specific EVO Assembly size shall not exceed the envelope size and combined weight of the same specific size of the existing EVO and removed components addressed in paragraphs 3.1 and 3.5. All welds used in the EVO Assembly design shall conform to NAVSEA Technical Publication S9074-AR-GIB-010/278.

## 3.6 Electrical Design Requirements

The EVO Assembly shall be solenoid operated to open and or close. When power is supplied to the EVO Assembly, the EVO Assembly shall provide indication to the system control console whether the valve is in the open, closed, or intermediate positions. For the intermediate position, the display on the control console shall illuminate both the open and closed positions. The EVO Assembly shall utilize  $110 \pm 10\% V_{rms}$ , single phase alternating current (AC). The EVO Assembly shall perform all functions when subject to voltages up to 155 VAC with transients in accordance with MIL-STD-1399(NAVY) Section 300A. Allowable voltage spikes, without adverse affect to the EVO Assembly operation, are indicated in Figure 2 of MIL-STD-1399(NAVY) Section 300A. The EVO Assembly position indication shall utilize 28 VAC to 110 VAC. The EVO assembly shall utilize 60 hertz (Hz)  $\pm 3$  Hz frequency. The EVO Assembly shall perform all functions with maximum operating amperage of 2 amperes. The EVO Assembly shall utilize a limit switch capable of utilizing either 110 VAC or 28 VDC, to identify and subsequently provide valve stem position. All electrical connections shall be compatible with the existing ships wiring. Fuses shall not be used on any input or output circuit to or from the valve. Active or passive circuitry shall be employed to limit current.

### 3.6.1 Enclosure

The EVO Assembly enclosure shall conform to MIL-STD-108E and MIL-E-2036D(SH), Class 1, submersible (50 foot).

### **3.6.2 Electromagnetic Interference (EMI)**

The EVO Assembly shall meet the electromagnetic interference (EMI) requirements of MIL-STD-461E for surface ship equipment mounted below deck.

### **3.6.3 Insulation Resistance**

Insulation resistance shall be tested per paragraph 4.6.2. The insulation resistance shall not be less than 10 megohms.

### **3.6.4 Mechanical Indexing**

Mating lines, cables and connections shall have mechanical indexing features to prevent improper connection. Wiring markings and indexing shall correspond to the manufacturer's applicable diagrams.

### **3.6.5 Dielectric High-Potential**

The EVO Assembly shall meet the dielectric high-potential requirements of MIL-STD-202G.

## **3.7 Controls and Indications**

### **3.7.1 Control**

Each EVO Assembly shall be capable of receiving digital commands for operation, from a control console. The EVO Assembly shall be capable of negating fluid flow (through valve closure) or permitting fluid flow (through valve opening) upon actuation from the control console. The control console may be a computer-based console or push button, hand switch type control console. The valve control and position indication shall be compatible with either type of control console without modification to either style of control console. Actuation from the control console may be from operator interface or signal response from a tank level indicating system.

#### **3.7.1.1 Warnings**

The EVO Assembly shall contain a warning plate or label that warns the operator to avoid electrically operating the EVO Assembly with the manual operator in a partial or full open position. Visual indicators shall be provided for full or partial manual operation.

#### **3.7.2 Indication**

The EVO Assembly shall be capable of indicating the valve position locally and remotely. Local indication shall be provided and functional for both electrical and manual actuation of the valve. At a minimum, local valve position indication shall contain a mechanical indication, but may also include an electrical indication. The local mechanical valve position indicator, located on the EVO Assembly, shall be provided requiring no electrical power for actuation. If provided, the local electrical valve position indicator shall utilize the existing power source, used for the EVO Assembly in its entirety for all functions, and shall not require any additional power source. Remote indication shall be compatible for electrical indication with an existing system control console, either a computer-based console or push button, hand switch type control console. The EVO Assembly shall provide indication to the system control console whether the valve is in the open, closed, or intermediate positions. For the intermediate position, the display on the control console or on the local electrical valve position indicator shall illuminate both the open and closed positions. The EVO Assembly shall utilize a limit switch capable of utilizing either 110 VAC or 28 VDC, to identify and subsequently provide valve stem position.

### **3.8 Materials**

All materials shall be compatible with the fluids (paragraph 3.3.2), the environment (paragraph 3.3.7) and interfacing surfaces (paragraph 3.5.2). The supplier shall identify the materials of construction, to include notation applicable material specifications, on the EVO Assembly drawing.

#### **3.8.1 Excluded Materials**

##### **3.8.1.1 Mercury**

Mercury, in any form, shall not be used in any facet of the EVO Assembly drawing or construction. No mercury bearing instruments or equipment that might cause contamination shall be used in the manufacture, fabrication, assembly, or testing of any material. In the event of any accident involving mercury contamination of the material being furnished or suspicion of such contamination, notify procuring activity immediately.

##### **3.8.1.2 Magnesium and Aluminum**

Magnesium and magnesium alloys shall not be used in any component of the EVO Assembly. Aluminum and aluminum alloys shall not be used for any liquid wetted applications. Gravity fed aluminum castings shall not be utilized.

##### **3.8.1.3 Cadmium Plating**

Cadmium plating shall not be used on any component of the EVO Assembly.

##### **3.8.1.4 Cast Iron**

Cast Iron shall not be used on any component of the EVO Assembly.

##### **3.8.1.5 Zinc**

Zinc castings or plating shall not be used on any component of the EVO Assembly.

### **3.9 Fabrication**

#### **3.9.1 Welding**

Welding and inspection of castings shall meet the requirements of publication, NAVSEA S9074-AR-GIB-010/278. Joint design shall meet the requirements of MIL-STD-22D. There shall be no pockets, crevices, porosity, or notches, which could become points of stress concentrations. Requirements for nondestructive testing shall conform to publication, NAVSEA T9074-AS-GIB-010/271. Welding procedure and welder performance qualifications shall be accomplished in accordance with publication, NAVSEA S9074-AQ-010/248.

#### **3.9.2 Casting**

Inspection and repair of castings shall meet the requirements of sections 12 and 13 of publication, NAVSEA S9074-AR-GIB-010/278. Requirements for nondestructive testing shall conform to publication, NAVSEA T9074-AS-GIB-010/271.

#### **3.9.3 Threaded Parts**

Threaded components within the EVO Assembly shall conform to FED-STD-H28A.

### **3.9.4 Painting**

The EVO Assembly exterior shall be painted before assembly in accordance with the following:

- a. External nonferrous and stainless steel surfaces shall not be painted.
- b. The total paint system shall last a minimum of 10 years without blistering, cracking, peeling, or flaking.

### **3.10 Technical Manuals**

At a minimum, a Commercial-off-the-Shelf (COTS) technical manual with any addenda or attachments necessary to meet the requirements of sections 3.10.1 through 3.10.8 shall be provided. This technical manual shall also comply to the requirements of MIL-DTL-24784/4B(SH). This manual shall be reproducible by the government without copyright for navy-wide distribution. Any requests for deviation from the requirements of MIL-DTL-24784/4B(SH) shall be forwarded to and resolved by **NSWCCD-SSES**.

#### **3.10.1 General**

The manual shall precisely reflect the configuration of the EVO Assembly. The manual shall consist of all data (volumes, folders, inserts, specification sheets, and any other documents) required for the operation and maintenance of the EVO Assembly.

#### **3.10.2 Safety**

The manual shall contain appropriate warnings, cautions and notes.

#### **3.10.3 Illustrations**

The manual shall contain illustrations to support the text. Illustrations shall be suitable for locating and identifying all components. Illustrations shall be prescreened, sharp, and with good contrast. Illustrations shall be line drawings or photographs. Photographs will only be used when a line drawing will not adequately illustrate the concept. Illustrations shall not be free hand sketches.

#### **3.10.4 Preparation for use**

The manual shall contain instructions for unpacking, assembling, and readying for operation.

#### **3.10.5 Operation**

Operating instructions shall include the principles of operation; illustrations and explanation of the uses and functions of all controls and indicators; initial set up; initial settings; and start up, normal operation, calibration, shutdown, power interruption and subsequent default positions.

#### **3.10.6 Maintenance**

The manual shall include the manufacturer's maintenance required for the EVO Assembly and shall be delineated such that, it can be applied by the intended government user. The manual shall include corrective maintenance and overhaul procedures with lists of required test equipment, special tools and materials. The nomenclature, part/model number and materials shall be included. Diagnostic tests and test to insure satisfactory performance shall be detailed. Tables listing wrench sizes and torque or other equivalent procedures for assembling joints and threaded parts shall be provided. The manual shall include instructions to permit overhaul by shipyards or

other repair facilities and shall include procedures for checking critical dimensions subject to wear or change and the acceptable dimensional limits and surface finish condition. The manual shall include appropriate procedures for part replacement, correction at a repair facility, or repair at the manufacturer's facility.

### **3.10.7 Troubleshooting**

The manual shall include troubleshooting procedures for all possible failure modes. The procedures shall include a description of the trouble, a possible cause, and a remedy. The remedy shall either provide the corrective action or refer the user to the section in the manual, which provides the corrective action.

### **3.10.8 Parts List, Illustrations, and Diagrams**

The manual shall include a parts list, which identifies all parts of the EVO Assembly. The parts list shall include actual manufacturer or vendor name, the part number, and a generic description necessary to obtain replacement parts. Clear and legible illustrations shall identify all component parts and parts relationships. Electrical point to point wiring diagrams with wire and terminal numbers shall be provided.

### **3.11 Provisioning Requirements**

#### **3.11.1 Deviations**

When, in the opinion of the Contractor, a deviation from standards, previous instructions from the technical representative, or requirements of this specification is in order, the Contractor shall make a request for deviation in writing to the Contracting Officer with an information copy to the technical representative. The Contracting Officer shall notify the contractor in writing of approval or disapproval, of the deviation, within thirty (30) days after receipt.

#### **3.11.2 Provisioning Conferences**

##### **3.11.2.1 Conferences, Agendas and Minutes**

The Contractor shall be required to deliver the agenda and minutes for all provisioning related conferences.

##### **3.11.2.2 Provisioning Guidance Conference (PGC)**

The PGC is held to ensure mutual understanding of provisioning requirements and responsibilities. It is used to solidify the provisioning team's understanding of the provisioning system being used to develop and submit Provisioning Technical Documentation (PTD). The Contractor shall make facilities available at the Contractor's site for the PGC, which should be convened within 60 days after contract award. The Contractor and subcontractor personnel that will prepare the provisioning documentation shall be required to attend. The attendees of the PGC shall thoroughly review the requirements of this specification and be ready to present any questions and recommendations relative to the provisioning requirements. Requirements and criteria for Interim Supply Support (ISS) will also be discussed during the PGC or when the ISS option is exercised.

##### **3.11.2.3 Provisioning Conference**

The purpose of the Provisioning Conference is to finalize the technical and management coding of the Provisioning Data Products (PDP). Requirements and criteria for any provisioning in-process reviews leading up to the provisioning conference will be addressed during the PGC. The requirement and criteria for a Provisioning Conference will be addressed during the PGC. When the provisioning conference is required, the Contractor shall provide facilities, unless the Government chooses to hold the conference at a Government facility.

#### **3.11.3 Provisioning Technical Documentation (PTD)**

##### **3.11.3.1 Provisioning Submittal**

The Contractor shall provide PTD in accordance with this specification, the LMI Worksheet, the associated DIDs, and the CDRLs for all Allowance Parts List (APL) worthy systems, equipment, components, and related engineering design changes and alterations (refer to Chapter 4, Appendices A and G of NAVSEA Technical Specification 9090-1500, available at <http://www.nslc.fmsso.navy.mil/TechLog/PAFOS/PAFOS0.htm>). Guidance for allowance documentation development for CaNDI is provided in Chapter 4, Appendix H of NAVSEA Technical Specification 9090-1500. PTD shall include CID, Data Product Deliverables and EDFP. PTD is required for all systems or equipment acquired for Navy use which have machinery or electronic circuitry parts that are subject to wear out, failure, or replacement and will require maintenance at the Organizational, Intermediate, or Depot (O, I, or D) level of maintenance. PTD shall be prepared for each unit (system, equipment, assembly, component) in accordance with the APL Worthiness Guidance found in Chapter 4, Appendix G of NAVSEA Technical Specification 9090-1500 and the Hull, Mechanical and Electrical (HM&E) Equipment APL Worthiness Guidance Exceptions. The Contractor shall develop and provide PTD for:

- (a) any nonstandard equipment or component obtained from any source of supply unable to furnish PTD,
- (b) any equipment or component which the Contractor manufactures or modifies,
- (c) any equipment or component that the Government has disapproved the Statement of Prior Submission (SPS) and
- (d) any unique or Special Purpose Test Equipment

### **3.11.3.2 Indenture Codes**

The Contractor shall assign indenture codes for all provisioning packages. Chapter 4 of NAVSEA Technical Specification 9090-1500 provides an example of a breakdown in a HM&E equipment, and illustrates the relationship between Indenture Code, Quantity per Assembly, Quantity per End Item, and Part Number or Reference Number.

### **3.11.4 PTD Development and Delivery**

Delivery of PTD shall either be via the Government's Interactive Computer Aided Provisioning System (ICAPS) or in a format and media compatible with ICAPS as specified in PAFOS Chapter 4, Appendix K. ICAPS was developed by the government for the purpose of developing and transmitting provisioning related data and is available free of charge to contractor personnel as well as government agencies. Two versions of ICAPS, with supporting documentation, are currently available for downloading from the ICAPS home page at <http://icaps.nctsjax.navy.mil>. ICAPS Personal Computer – Windows (ICAPS PC-WIN), which allows for remote provisioning development and the ability to produce the required formatted outputs and ICAPS Client-Server (ICAPS C/S), which is a real-time database that enables all provisioning related activities to access and manipulate the data in the database over the internet. The contractor shall contact the TSA to obtain a user ID and password required for access to ICAPS C/S.

### **3.11.5 Statement of Prior Submission (SPS)**

The Contractor shall submit a SPS by providing Component Identification Data (CID) in accordance with the requirements of paragraph 3.11.6.2. The SPS shall apply to the end item, or to any component thereof, and it shall provide total identification of the system, equipment or component. By submitting a SPS, the contractor certifies all of the following:

- (a) PTD, which may satisfy the requirements of the contract, has previously been furnished to the Government for the system, equipment or component being procured. (When a SPS is submitted without an APL identified, the submitter shall identify the Procurement Contract Control Number (PCCN), the submittal date and the government agency to which the PTD was previously submitted.)
- (b) The required maintenance philosophy is fully supported.
- (c) All replacement parts are 100% identical to those provided by the previously furnished PTD.

If there are maintenance philosophy/part differences, a SPS with Differences shall be submitted as a DCN with supporting EDPF, which identifies the differences. The SPS with Differences shall identify the changed part numbers from before the change as deletions and the new part numbers as additions. The government shall reject a SPS if it does not meet both the data and certification requirements of this contract. If a SPS is rejected, the contractor shall be required to submit a new provisioning package, which meets the requirements of paragraph 3.11.3.1.

### **3.11.6 Component Identification Data (CID)**

The CDRLs and LMI Worksheet specify the data, format and media requirements for CID. The Contractor shall use CID to submit identification data for all systems and equipment. CID shall be delivered concurrently with every submittal of Data Product Deliverable. The Contractor shall use CID for submittal of Provisioning Header Data, Statements of Prior Submission (SPS), and Advance RIC requests.

#### **3.11.6.1 Provisioning Header Data CID**

The Contractor shall submit header data with each provisioning project. For Provisioning Header Data, the Contractor shall submit the provisioning data products specified in the LMI Worksheet for each PCCN. The data shall provide the Navy sufficient end item information to identify the system or equipment, the applicable contract, and the planned installations.

#### **3.11.6.2 Statement of Prior Submission (SPS) CID**

To satisfy the data and delivery requirements of SPS for GFE and CFE, the Contractor shall submit the provisioning data products specified in the LMI Worksheet.

### **3.11.7 Tools and Test Equipment**

Tools and test equipment built-in as an integral part of the equipment shall always be included in the PPL for the equipment.

### **3.11.8 Engineering Data for Provisioning (EDFP)**

EDFP is required for all systems or equipment that are acquired for Navy use for which PTD is being acquired. EDPF is the data acquired by contract to support LMI supportability analysis. It is the technical data that provides definitive identification of dimensional, material, mechanical, electrical or other characteristics adequate for provisioning of the support items of the end article(s) on contract. EDPF consists of, but is not limited to, data such as specifications, standards, drawings, photographs, sketches and descriptions, and the necessary assembly and general arrangement drawings, schematics, drawings, schematic diagrams, wiring and cable diagrams, etc. This data is necessary for the assignment of Source, Maintenance, and Recoverability (SMR) codes to assignment of Item Management Codes, prevention of proliferation of identical items in the Government inventory, maintenance decisions, and item identification necessary in the assignment of a National Stock Number (NSN).

EDFP is used to accomplish the provisioning process and is required to perform provisioning when MIL-DTL-31000 is not on contract. It is important to emphasize that DOD policy is to use the existing Technical Data Package MIL-DTL-31000 contract requirements, *if part of the contract*, to support the provisioning process. Generally, this can be done by acquiring copies of products being developed for the MIL-DTL-31000 DIDs (DI-DRPR-81000 or DI-DRPR-81003) at a time of the provisioning events for cost of reproduction and delivery without regard to completeness of the drawing. EDPF shall be provided from the Technical Data Package CDRLs for DIDs DI-DRPR 8100 or DI-DRPR-81003 tailored to support the provisioning process and delivered concurrent with PTD. However, if CDRLs for these two DIDs are *not* part of the contract, the Contractor shall provide the EDPF in accordance with CDRL(s) for DID DI-ALSS-81530. EDPF shall not be provided when the item is identified in the Defense Integrated Data System with a type item identification of 1, 1A (K), or 1B (L) or (3) the item is listed as a reference item (subsequent appearance of an item on a parts list).

### **3.11.9 Manufacturer's Commercial Manuals**

The contractor shall provide the manufacturer's commercial manuals. These manuals will be used to supplement EDPF and the provisioning data. This requirement applies only if commercial manuals are available. If no commercial manual exists for the equipment or component, then this requirement for that equipment or component will be waived.

### **3.11.10 Vendors/Subcontractors**

When the prime contractor buys end articles or a portion thereof from a vendor/subcontractor, the prime contractor shall impose this specification upon its vendors/subcontractors. The inclusion of the requirement for such data on contractor's subcontractors/purchase orders to its vendor/subcontractors does not relieve the prime contractor of its obligation to insure timely delivery of the required Provisioning Data Products, EDPF, and other provisioning deliverables.

### **3.11.11 Source, Maintenance and Recoverability (SMR) Code**

When tasked to assign SMR codes, the contractor shall develop them in accordance with NAVSUP P-719 to reflect the Government approved maintenance philosophy.

### **3.11.12 Technical Replacement Factors (TRF)**

The contractor shall compute a TRF. Chapter 4, Appendix C of NAVSEA Technical Specification 9090-1500 provides recommended guidelines for this computation. TRFs shall be reported in the Maintenance Replacement Rate I (MRRI) block according to the Navy's required provisioning data product format (specified in the LMI Worksheet).

### **3.11.13 Design Change Notice (DCN)**

The Contractor shall notify the TSA of all changes, whether of a production or modification type, which are approved for incorporation into the end item and which modify, add to, delete, or supersede parts in the end item or its supporting equipment. When an approved engineering design or production change requires new identification, the contractor shall submit PTD revisions via DCNs in accordance with the following:

- (a) When the approved change affects interchangeable repairable assemblies so as to introduce non-interchangeable parts, identify the part number before the change as a deletion and the part number after the change as an addition.
- (b) Change and document the part number of the next higher assembly, and those of all progressively higher assemblies, up to the assembly where interchangeability is reestablished. PTD shall include the interchangeable assembly.
- (c) EDPF is not required for deleted items.
- (d) Changes that occur after PTD has been delivered shall be documented as a revision to the applicable PTD.

When the design change significantly impacts the system or equipment configuration, and when directed by the Administrative Contracting Officer, a changed system or equipment shall be provisioned as a new end item and documented by PTD with associated EDPF.

### **3.11.14 Interim Supply Support (ISS) Provisioning Requirements**

If the ISS option is exercised, Interim Support Item Lists (ISILs) will be required which will provide a parts breakdown of the system or equipment using mandatory data elements for each part. The specific data elements required to determine ISS requirements are identified in the LMI Worksheet attached to the contract. The contractor shall utilize the same data development and submission methodology for ISS as required for the remainder of the provisioning related data.

### **3.12 Drawings**

Drawings shall be prepared in accordance with ASME Y14.1, Y14.2M, Y14.3M, and Y14.5M and all text written in the English language. All drawings shall be completely legible and suitable for microfilming and reproduction. A conformance verification drawing shall be submitted to **NSWCCD-SSES (LCM)** to insure the EVO Assembly meets the requirements of this specification. **NSWCCD-SSES (LCM)** shall review and approve the conformance verification drawing. The EVO Assembly drawing shall be marked "NAVSEA CONTROLLED DOCUMENT – no changes permitted without NAVSEA approval."

#### **3.12.1 Types of Drawings**

The following types of drawings shall be prepared.

##### **3.12.1.1 Outline Drawing**

An external arrangement drawing shall be prepared that shows all necessary external views of the EVO Assembly and shall include the center of gravity, weight and all external dimensions required for the possible modification of the applicable ship's machinery arrangement drawings. The drawing shall show the space required to install or remove the EVO Assembly from the manifold.

##### **3.12.1.2 Assembly Drawing**

A drawing showing complete elevation and sectional views of the EVO Assembly shall be prepared that depicts the relationship of all parts and components in the EVO Assembly. The Top Assembly drawing shall identify by correspondence number and date, the acceptance for Navy shock, vibration and EMI testing. Liberal use of enlarged views or sections shall be made. Subassembly drawings conforming to the above shall be furnished to aid in the clarity of individual components, where required. The drawings shall be such that a thorough understanding of the design material selection and construction of the EVO Assembly may be obtained without reference to related detailed drawings.

##### **3.12.1.2.1 List of Materials**

The assembly drawing shall contain a list of materials showing the names of parts with identifying numbers and materials of all parts. The identifying numbers shall also be shown adjacent to the part shown in the various views, with arrows pointing to the parts. Each item shall be easily located with a find number in a minimum of two views.

##### **3.12.1.3 Wiring Drawings**

Wiring assembly drawings showing terminal connections shall be provided for all electrical components furnished with the EVO Assembly.

##### **3.12.1.3.1 Electrical Drawings**

The electrical drawings shall consist of separate schematic (elementary) and connection (point-to-point wiring) diagrams to clarify the control functions and simplify the wiring, as applicable.

##### **3.12.1.3.2 Legends**

Standard legends and symbols specified in ANSI/IEEE 315A shall be used on all electrical drawings.

##### **3.12.1.4 Data**

The following data shall be prepared:

- a. Hydrostatic test pressure.
- b. A drawing list tabulation with columns for drawing title, manufacturer's drawing number, and materials of construction. This list shall include all equipment drawings that constitute the design of the EVO Assembly, as applicable.
- c. List of recommended onboard repair parts and quantities recommended.
- d. Any prior approved procuring activity deviations.
- e. Shock, vibration and EMI testing.

### **3.12.1.5 Purpose of Drawings**

Sufficient drawings shall be prepared to:

- a. Provide design information to insure conformance to requirements of this specification, including compatibility with the intended use on JP-5 manifolds.
- b. Evaluate performance and maintenance capability
- c. Enable shipyard installation without contractor's assistance.
- d. Enable naval ship and shore activities to repair and maintain the EVO Assembly without assistance from the original contractor.

### **3.12.1.6 Final Drawings**

Final submitted drawings and associated lists shall be to the level that provides engineering definition sufficiently complete to support the purposes listed above without resorting to additional product design effort, additional design data, or recourse to the original design activity, and the specific requirements in this specification. Ten copies of final drawings, for each size within the family size, shall be provided for each delivery order.

## **4.0 QUALITY ASSURANCE PROVISION**

### **4.1 Responsibility for Inspection**

Unless otherwise specified in the contract, the Contractor is responsible for the performance of all inspection requirements specified herein. Except as otherwise specified in the contract, the Contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein. The government reserves the right to perform any of the inspections set forth in the contract where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements. Any inspections performed by the government shall not relieve the Contractor of its responsibility for quality assurance and for providing EVO Assemblies, which conform to the contract requirements.

#### **4.1.1 Quality Program Requirements**

The Contractor shall possess a quality or inspection system that conforms to a higher-level quality standard, such as ANSI/ISO/ASQC Q90001-2000.

### **4.2 Classification of Inspections**

The inspection requirements specified herein are classified as follows:

- a. First Article inspection (see paragraph 4.3).
- b. Conformance inspection/Production testing (see paragraph 4.4).

### **4.3 First Article Inspection**

First Article inspection shall consist of examinations and tests specified in Table 1. Inspections identified within Table 1 are sequentially provided in the order to be accomplished. Integral to First Article testing are requirements,

wholly or partially, Conformance Inspection/Production Testing that is invoked in order to demonstrate the durability of the EVO Assembly after specific First Article tests. A procedure for the First Article inspection shall be submitted to NSWCCD-SSES to review and approval 45 days prior to commencement of the test(s). Upon completion of the First Article test(s), a test report shall be prepared and submitted to NSWCCD-SSES for review and approval within 60 days of completing the First Article Test(s).

**TABLE 1 – First Article Inspection**

<b>FIRST ARTICLE EXAMINATION OR TEST</b>	<b>REQUIREMENT</b>	<b>EXAMINATION or TEST</b>	<b>PROCEDURES</b>
Shipboard Evaluation	3.2.1.1	4.9	4.9
Production Testing	4.4	4.4	4.4
Seat Leakage Test	3.4.1	4.10	4.10
Heat Rise Test	3.3.5	4.11	4.11
Enclosure (Submergence) Test	3.6.1	4.12	4.12
Electrical Testing	3.6.3, 3.6.5	4.6	4.6.1, 4.6.2, 4.6.3
Electromagnetic Interference	3.6.2	4.13	4.13
Endurance Test	3.2.1.1, 3.4.1	4.14	4.14
Production Testing	4.4	4.4	4.4
Seat Leakage Test	3.4.1	4.10	4.10
Shock Test	3.2.3	4.15	4.15
Production Testing	4.4	4.4	4.4
Seat Leakage Test	3.4.1	4.10	4.10
Vibration Test	3.2.4	4.16	4.16
Production Testing	4.4	4.4	4.4
Seat Leakage Test	3.4.1	4.10	4.10
Post Inspection Test		4.17	4.17

#### **4.4 Conformance Inspection/Production Testing**

Conformance inspection/production testing shall be performed on each EVO Assembly prior to delivery and shall consist of applicable examinations and tests specified in Table 2. A report detailing the results of the conformance inspection/production testing shall be provided to the cognizant Defense Contract Management (DCM) office. A consolidated report detailing the test results may be submitted.

#### **4.5 Visual Inspection**

The EVO Assembly shall be visually inspected for conformance to the applicable drawing(s). Inspection shall verify conformance to the drawings regarding external dimensions, bolting, wiring, name plate data, and surface condition.

**TABLE 2 – Conformance Inspection/Production Testing**

<b>PRODUCTION UNIT EXAMINATION OR TEST</b>		<b>REQUIREMENT</b>		<b>EXAMINATION or TEST</b>		<b>PROCEDURES</b>
Visual Inspection		3.12		4.5		4.5
Electrical Testing		3.6.3, 3.6.5		4.6		4.6.1, 4.6.2, 4.6.3
Hydrostatic Test		3.3.8.1		4.7		4.7
Operational Test		3.3.4, 3.4.1, 3.5.3, 3.7.2		4.8		4.8.1, 4.8.2

**4.6 Electrical Testing****4.6.1 Dielectric High-Potential Test**

The dielectric high-potential **test** shall be performed on the coil in accordance with MIL-STD-202G, method 301. Alternating current test voltage shall be twice the rated voltage plus 1000 volts. This test shall be conducted on one lot of test coils prior to manufacturing release. After the initial test performed by the coil manufacturer, subsequent tests shall be conducted at 800 VAC.

**4.6.2 Insulation Resistance Test**

Insulation resistance test shall be performed on the coil in accordance with MIL-STD-202, method 302, test condition B. The insulation resistance shall not be less than 10 megohms.

**4.6.3 Coil Resistance Test**

The direct current (DC) resistance of the solenoid coil shall be measured and the temperature at which the measurement is taken shall be recorded. After temperature compensation, the DC resistance of the coil shall be within plus or minus ten percent of the nominal value specified in the coil detailed drawing(s).

**4.7 Hydrostatic Tests**

The EVO Assembly shall be installed on a fixture simulating the valve body and shall be subjected to a pressure of 300 PSIG. For conformance inspection/production testing, the hydrostatic test shall be conducted for one minute. For first article testing, the hydrostatic test shall be conducted for 30 minutes. No leakage through any pressure boundary surface(s) is permitted. The EVO Assembly shall exhibit no evidence of distortion as determined by visual inspection. For First Article Test(s) and Conformance test(s), the media used for the hydrostatic test shall be freshwater at ambient temperature.

**4.8 Operational Tests**

The test valve shall operate smoothly, without failure, during each of the following tests:

#### **4.8.1 Electrically Powered Tests**

The EVO Assembly shall be cycled twenty times with a minimum of one cycling at each maximum differential pressure in each direction and also a zero differential pressure. Actuations shall be conducted at maximum and minimum applied voltages, see paragraph 3.6, in each tested direction. Actuations shall be within the times specified in paragraph 3.4.1. Included in the electrically powered test will be the testing of the failure positioning. Scheduled within the test plan shall be five random power interruptions sufficient to trigger the failure position of the EVO Assembly. Test results shall conform to criteria established in paragraph 3.3.4. Concurrent with all electrically powered tests, witness to correct valve positioning indication shall be accomplished, per paragraph 3.7.2.

#### **4.8.2 Manual Tests**

The EVO Assembly shall be cycled manually ten times, with a minimum of one cycling at each of the differential pressure test conditions specified in paragraph 4.8.1. Failure positioning testing is not required for manual EVO Assembly testing. Valve position indication is required, concurrent to all manual EVO Assembly testing. All testing shall meet the requirements specified in paragraphs 3.5.3 and 3.7.2.

#### **4.9 Shipboard Evaluation**

A shipboard test evaluation shall be conducted by the Government on a 5" model EVO Assembly. The shipboard evaluation will be conducted aboard a CVN-68 Class aircraft carrier. The test shall be conducted for a six-month period and shall be conducted during a deployment period. The shipboard test will subject the EVO Assembly to rigorous operational use in its intended field.

#### **4.10 Seat Leakage Tests**

Valve seat leakage tests shall be conducted at maximum differential pressure (250 PSID) in each direction. A single test in each direction shall be conducted for a period not less than 5 minutes. Leakage shall meet MSS-SP61 standard leakage criteria of 10 cc/hr/in of seat diameter, as specified in paragraph 3.4.1. Valve seat leakage testing shall be conducted for electrically actuated valve closure and manual valve closure. Fluid media used for testing shall be freshwater.

#### **4.11 Heat Rise Tests**

The EVO Assembly shall be energized with 115 VAC until temperature stabilization (equilibrium) is achieved. The current and EVO Assembly surface temperature shall be recorded at 15-minute intervals during this test. Stabilization, or equilibrium, is achieved when the EVO Assembly surface temperature changes by less than 2 degrees C in two consecutive 15-minute readings after a minimum of two hours of being continuously energized.

A minimum of nine temperature, recording devices, such as thermocouples, shall be used on the solenoid housing, in groups of three. Measurements shall be recorded at the base end, midsection and top end of the barrel portion of the solenoid housing. The sets of recording devices shall be evenly spaced around the solenoid housing. The test shall be conducted at an ambient temperature of 120 degrees F +/- 2 degrees F. The temperature rise shall not exceed 10 degrees C, not to exceed a solenoid housing temperature of 140 degrees F.

#### **4.12 Enclosure (Submergence) Test**

The solenoid enclosure shall be subjected to a submergence test (50 foot) applicable to watertight enclosures in accordance with MIL-STD-108, except that fresh water shall be used. Testing shall be performed with the mating half of the electrical connector and cable attached to the solenoid. This test may be performed independently of the manifold, or valve body. During the first third (first 8 hours) of testing and the final third (final 8 hours) of testing, the EVO Assembly shall be energized and cycled. The EVO Assembly shall be cycled at the rate of a minimum of 8

cycles per hour. EVO Assembly shall function without failure. Middle third (middle 8 hours) of testing, shall be conducted without the EVO Assembly being energized.

#### **4.13 Electromagnetic Interference Test**

Electro-magnetic interference tests shall be performed on the actuator and shall conform to the applicable requirements of MIL-STD-461E.

#### **4.14 Endurance Tests**

An endurance test shall be conducted on a 5 inch EVO Assembly. The EVO Assembly shall be cycled 10,000 times with the stem in the vertical position. 500 of these cycles shall be performed as a continuous series of cycles at a rate of approximately one cycle per minute. The electric actuating time for an opening or shutting cycle shall be recorded each 500 cycles and shall conform to the requirements specified in paragraph 3.4.1. After each 500 cycles, the EVO Assembly shall be manually opened and closed to determine compliance of the requirements specified in paragraph 3.5.3. Additionally, the EVO Assembly shall be cycled 2,000 times when the test platform is 45 degrees from horizontal, meaning the EVO Assembly and the valve stem is in a 45 degree position from the horizontal. During this inclined test, 500 of these cycles shall be performed at a continuous cycle rate of approximately one cycle per minute. The electric actuating time for an opening or shutting cycle shall be recorded each 500 cycles and shall conform to the requirements specified in paragraph 3.4.1. After each 500 cycles, the EVO Assembly shall be manually opened and closed to determine compliance of the requirements specified in paragraph 3.5.3

#### **4.15 Shock Test**

Shock testing shall be conducted in accordance with MIL-S-901D, grade A, class 1, Type A, hull mounted and MIL-STD-798. The requirements of MIL-STD-798 shall be applied when determining which sizes of EVO Assembly from a given manufacturer must be shock tested; in general each actuator design shall be tested in both the largest and the smallest valve sizes to be qualified. The largest size will qualify the largest valve stem/disc configuration while the smallest size will qualify the smallest attachment configuration. The EVO Assembly shall be installed into a rigid manifold-type fixture that provides for pressurized operation of the EVO Assembly. The EVO Assembly shall be energized and fully operational. The EVO Assembly and fixture shall be attached to the appropriate shock machine fixture for base mounted testing. The EVO Assembly shall be subjected to shock tests in both the fully closed and fully open operating conditions as listed in Table 3.; the fully closed condition is considered to be the normal operating condition. The valve shall be pressurized with clean water to the maximum design pressure of 250 psig during testing; the valve/fixture shall be pressurized on the inlet side with the valve in the full closed condition and pressurized throughout in the full open condition. The testing medium shall be clean tap water at temperature not less than 40°F nor exceeding 100°F. During the valve closed testing the seat leakage measured after each blow shall not exceed the rate specified in 4.10; momentary opening at the time of impact blow is permissible but the amount of water allowed to pass the seat shall not exceed 100 cubic centimeters.

The following post shock tests are required;

Note: Per paragraph 4.3 and Table 1, items (a) through (e) are required via Production Testing and Seat Leakage Test. Duplication of these post shock tests is not required.

- (a) External visual and dimensional check. Do not disassemble the valve. This may include dye penetrant or magnetic particle inspection to verify crack(s) in highly stressed areas. Permanent deformation, misalignment or functional impairments shall be cause for rejection.
- (b) Operate all manual and electrical controls and verify that all components including indicators are functional and the valve strokes from fully closed to fully open. Valve operation shall be continuous and smooth without binding and should exhibit no degradation from the pre-shock testing.
- (c) Hydrostatically test the valve to 300psig for at least 10 minutes. There shall be no leakage.
- (d) Perform a seat tightness test per paragraph 4.10. Leakage shall not exceed the rate specified in paragraph 3.4.1.

- (e) Insulation resistance shall be tested per paragraph 4.6.2. The insulation resistance shall not be less than 10 megohms.
- (f) Disassemble the EVO Assembly. Perform a complete visual and dimensional check of all mechanical valve components. Examine all electrical components including wire harnesses, circuit boards, circuit board components (particularly capacitors and other extended lead items) and connectors. Any permanent deformation or damage, especially conditions detrimental to the operational of the EVO Assembly, shall be cause for rejection.

**TABLE 3 – Shock Test Schedule**

Test Type	Test Condition	
	Valve Closed (pressurized on inlet)	Valve Open (pressurized throughout)
Lightweight Shock Test (18 blows total)	9 blows; 1,3,5 ft impacts-three axes	9 blows; 1,3,5 ft impacts-three axes
Medium Weight Shock Test (9 blows total)	3 blows group I; 3 blows group III	3 blows group II

#### 4.16 Vibration Test

Vibration testing shall be conducted in accordance with MIL-STD-167-1 Type I Environmental. Each size of EVO Assembly from a given manufacturer that is shock tested must be vibration tested. The EVO Assembly shall be installed into a rigid manifold-type fixture that provides for pressurized operation of the EVO Assembly. The EVO Assembly shall be energized and fully operational. As practical during either the exploratory or variable frequency tests in each axis the internal components including electrical parts shall be observed for resonant behavior; inspection covers or access doors shall be opened as necessary. At each frequency during the 5-minute variable frequency tests in each axis the EVO Assembly shall be operated electrically and manually between fully closed and fully open; any resonant behavior will be investigated and identified. When the EVO Assembly is in the fully closed position 250 psig pressure with clean tap water shall be applied to the inlet and the outlet shall be vented; seat leakage shall increase above that allowed in paragraph 4.10. When the valve is in the open position the valve shall be pressurized throughout to 250 psig. Handheld or magnetic base accelerometers shall be used to qualify resonant conditions. If no resonant frequency is identified the EVO Assembly shall also be operated electrically and manually between fully closed and fully open at 15-minute intervals during the 2 hour endurance test in each axis. Post vibration testing shall consist of:

Note: Per paragraph 4.3 and Table 1, items (a) through (e) are required via Production Testing and Seat Leakage Test. Duplication of these post shock tests is not required.

- (a) Operate all manual and electrical controls and verify that all components including indicators are functional and the valve strokes from fully closed to fully open. Valve operation shall be continuous and smooth without binding and should exhibit no degradation from the pre-vibration condition.
- (b) Hydrostatically test the valve to 300psig for at least 10 minutes. There shall be no leakage.
- (c) Perform a seat tightness test per paragraph 4.10. Leakage shall not exceed the rate specified in paragraph 3.4.1.
- (d) Insulation resistance shall be tested per paragraph 4.6.2. The insulation resistance shall not be less than 10 megohms.
- (e) Visually and dimensionally check any components that were resonant during vibration. Any permanent deformation or damage, especially conditions detrimental to the operational of the EVO Assembly, shall be cause for rejection.

#### 4.17 Post Test Inspection Test

The EVO Assembly shall be inspected for damage. All of the specified and executed tests shall not result in failure of any portion of the EVO Assembly, or cause damage, permanent deformation, or any detrimental effect to

any portion of the EVO Assembly. The valve gasket body connection, stem, and stem disc shall be liquid penetrant inspected in accordance with MIL-STD-271. Acceptance criteria for liquid penetrant inspection shall be in accordance with the original acceptance criteria for the part. Liquid penetrant inspection criteria for the valve body shall have no linear indications longer than 1/8 inch.

#### 4.18 Disposition of First Article Samples

The EVO Assembly, including all sub-components, subjected to any portion of the First Article Testing shall not be considered a deliverable item under the contract and they shall be permanently marked "First Article Test Sample."

### 5.0 PACKAGING REQUIREMENTS

#### 5.1 Preservation-Packaging

Actuator and valve assemblies shall be individually preserved-packaged level A, packed level C as specified and marked in accordance with MIL-E-16298D.

#### 5.2 Cushioning and Wrapping Materials

##### 5.2.1 Level A Preservation-Packaging and Levels A and B Packing

Use of all types of loose-fill materials for packaging and packing applications such as cushioning, filler or dunnage is prohibited for materials destined for shipboard installation or stowage.

##### 5.2.2 Level C Preservation-Packaging and Packing

When loose-fill materials are used for packaging and packing applications such as cushioning, filler, and dunnage, all containers (unit, intermediate, and shipping) shall be marked or labeled with the following information:

CAUTION
Contents cushioned, etc., with loose-fill material, shall not be taken aboard ship. Remove and discard loose-fill material before shipboard stowage. If required, re-cushion with cellulosic material, bound fiber, fiberboard, or transparent flexible cellular material.

##### 5.2.3 Cushioning, Filler and Wrapping Material

Cushioning, filler and wrapping materials selected, whenever available, shall exhibit improved performance for resistance to fire.

## SECTION D Packaging and Marking

Preservation, packaging and packing shall be in accordance with paragraph 5.1 of the Performance Specification.

SECTION E Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001 through 0007	Contractor’s Plant	DCM	Contractor’s Plant	DCM
0008 through 0014	Destination	NSWCCD	Destination	NSWCCD

CLAUSES INCORPORATED BY REFERENCE:

52.246-2	Inspection Of Supplies--Fixed Price	AUG 1996
52.246-16	Responsibility For Supplies	APR 1984
252.246-7000	Material Inspection And Receiving Report	DEC 1991

## SECTION F Deliveries or Performance

## DELIVERY INFORMATION

Shipping instructions will be provided on individual resultant delivery orders.

## CLAUSES INCORPORATED BY REFERENCE:

52.211-17	Delivery of Excess Quantities	SEP 1989
52.242-15	Stop-Work Order	AUG 1989
52.242-17	Government Delay Of Work	APR 1984
52.247-59	F.O.B Origin--Carload and Truckload Shipments	APR 1984

## CLAUSES INCORPORATED BY FULL TEXT

52.211-8 TIME OF DELIVERY (JUN 1997)

(a) The Government requires delivery to be made according to the following schedule:

REQUIRED DELIVERY SCHEDULE  
(Contracting Officer insert specific details)

<u>ITEM</u>	<u>REQUIRED DELIVERY</u>
0001 through 0006, 007AA	Orders providing for 50 units or less shall be delivered within 120 days after the date of order. Orders that provide for 50 units or more shall be delivered at the rate of 50 units every 120 days until completion.
0007AB	Same as Item 0013
0008	90 days after date of order
0009AA	45 days prior to commencement of First Article Test (FAT)
0009AB	60 days after completion of FAT
0010	90 days after date of order
0011AA	45 days prior to commencement of First Article Test (FAT)
0011AB	60 days after completion of FAT

0012AA, 0012AB, 0012AC	180 days after date of order
0012AD	90 days after date of order
0012AE	95 days after date of order
0012AF	60 days after date of order
0013	90 days after date of order
0014AA	Same as Item 0013

The Government will evaluate equally, as regards to time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above, will be considered nonresponsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an offeror offers an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

ITEM NO.	OFFEROR'S PROPOSED DELIVERY SCHEDULE QUANTITY	WITHIN DAYS AFTER DATE OF CONTRACT

(b) Attention is directed to the Contract Award provision of the solicitation that provides that a written award or acceptance of offer mailed, or otherwise furnished to the successful offeror, results in a binding contract. The Government will mail or otherwise furnish to the offeror an award or notice of award not later than the day award is dated. Therefore, the offeror should compute the time available for performance beginning with the actual date of award, rather than the date the written notice of award is received from the Contracting Officer through the ordinary mails. However, the Government will evaluate an offer that proposes delivery based on the Contractor's date of receipt of the contract or notice of award by adding (1) five calendar days for delivery of the award through the ordinary mails, or (2) one working day if the solicitation states that the contract or notice of award will be transmitted electronically. (The term "working day" excludes weekends and U.S. Federal holidays.) If, as so computed, the offered delivery date is later than the required delivery date, the offer will be considered nonresponsive and rejected.

(End of Clause)

## SECTION G Contract Administration Data

## CLAUSES INCORPORATED BY REFERENCE:

252.242-7000 Postaward Conference

DEC 1991

## CLAUSES INCORPORATED BY FULL TEXT

**5252.232-9000 SUBMISSION OF INVOICES (FIXED PRICE) (JUL 1992)**

(a) "Invoice" as used in this clause does not include contractor requests for progress payments.

(b) The contractor shall submit original invoices with copies to the address identified in the solicitation/contract award form (SF 26-Block 10; SF 33-Block 23; SF 1447-Block 14), unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order (DD 1155-Block 13 or SF 26-Block 10).

(c) The use of copies of the Material Inspection and Receiving Report (MIRR), DD Form 250, as an invoice is encouraged. DFARS Appendix F-306 provides instructions for such use. Copies of the MIRR used as an invoice are in addition to the standard distribution stated in DFARS F-401.

(d) In addition to the requirements of the Prompt Payment clause of this contract, the contractor shall cite on each invoice the contract line item number (CLIN); the contract subline item number (SLIN), if applicable; the accounting classification reference number (ACRN) as identified on the financial accounting data sheets, and the payment terms.

(e) The contractor shall prepare a consolidated invoice covering all shipments delivered under an individual order.

(f) If acceptance is at origin, the contractor shall submit the MIRR or other acceptance verification directly to the designated payment office. If acceptance is at destination, the consignee will forward acceptance verification to the designated payment office.

(End of clause)

## SECTION H Special Contract Requirements

## CLAUSES INCORPORATED BY FULL TEXT

## CAR-H05 PAST PERFORMANCE ASSESSMENT (SYSTEMS OR SHIP REPAIR AND OVERHAUL) (APR 2000)

(a) The contractor, in performing this contract, will be subject to a past performance assessment in accordance with FAR 42.15, the Department of the Navy Contractor Performance Assessment Reporting System (CPARS) Guide (herein referred to as the Navy CPARS Guide), and the CPARS Users Manual in effect on the date of award. All information contained in this assessment may be used, within the limitations of FAR 42.15, by the Government for future source selection in accordance with FAR 15.304 when past performance is an evaluation factor for award. The assessment (herein referred to as the Contractor Performance Assessment Report (CPAR)) will be prepared by government personnel and reviewed by contractor personnel, via on-line, at the CPARS Web Site <http://www.cpars.navy.mil>. The CPAR will be prepared on an annual basis as determined by the Contracting Officer, with interim and final assessments as prescribed by the Navy CPARS guide. The Navy CPARS guide, the CPARS Users Manual and additional CPARS information can be found at the above CPARS Web Site.

(b) Access to the CPAR will require user id/passwords which will be provided to the contractor prior to the initial report due date. Utilizing the user id/passwords, contractor personnel will be able to review the CPAR and will have a 30-calendar-day period in period in which to agree/disagree with the ratings, enter comments, rebut statements or add information on an optional basis. After contractor input or 30 days from the date of government notification of CPAR availability, whichever occurs first, the CPAR will be reviewed by the government. The government will have the option of accepting or modifying the original ratings. The contractor will then be notified when the completed CPAR is posted in the CPARS web site. The CPAR is not subject to the Disputes clause of the contract, nor is it subject to appeal beyond the review and comment procedure described above and in the Navy CPARS Guide.

(c) The contractor will be assessed on the following elements and sub-elements:

(1) Quality of Product or Service: This element is comprised of an overall rating and six sub-elements. The overall rating at the element level is the government's integrated assessment as to what most accurately depicts the contractor's technical performance or progress towards meeting requirements. It is not a predetermined roll-up of the sub-element assessments.

(A) Product Performance: The contractor's achieved product performance relative to performance parameters required by the contract.

(B) Systems Engineering: The contractor's effort to transform operational needs and requirements into an integrated system design solution.

(C) Software Engineering: The contractor's success in meeting contract requirements for software development, modification, or maintenance. As a source of information to support this evaluation, the government may use results from the Software Capability Evaluations (SCEs) (using the Software Engineering Institute's (SEI's) Capability Maturity Model (CMM) as a means of measurement; Software Development Capability Evaluations (SDCEs); or similar software assessments.

(D) Logistics Support/Sustainment: The success of the contractor's performance in accomplishing logistics planning.

(E) Product Assurance: The contractor's success in meeting program quality objectives, e.g., producibility, reliability, maintainability, inspectability, testability, and system safety, and controls over the manufacturing process.

(F) Other Technical Performance: All other technical activity of the contractor critical to successful contract performance. This will include additional assessment aspects that are unique to the contract or that cannot be captured in another sub-element.

(2) Schedule: Contractor's timeliness in completing contract or task order milestones, delivery schedules, and administrative requirements.

(3) Cost Control (Not required for FFP or FFP/EPA): The contractor's effectiveness in forecasting, managing, and controlling contract cost.

(4) Management: This element is comprised of an overall rating and three sub-elements. The government will assess activity critical to successfully executing the contract within one or more of these sub-elements. The overall rating at the element level is the government's integrated assessment as to what most accurately depicts the contractor's performance in managing the contracted effort. It is not a predetermined roll-up of the sub-element assessments.

(A) Management Responsiveness: The contractor's timeliness, completeness and quality of problem identification, corrective action plans, proposal submittals (especially responses to change orders, ECPs, or other undefinitized contract actions), the contractor's history of reasonableness and cooperative behavior, effective business relations, and customer satisfaction.

(B) Subcontract Management: The contractor's success with timely award and management of subcontracts, including whether the contractor met small/small disadvantaged and women-owned business participation goals.

(C) Program Management and Other Management: The extent to which the contractor discharges its responsibility for integration and coordination of all activity needed to execute the contract; identifies and applies resources required to meet schedule requirements; assigns responsibility and tasks/actions required by the contract; and communicates appropriate information to affected program elements in a timely manner. In addition, the contractor's risk management practices will be assessed, especially the ability to identify risks and formulate and implement risk mitigation plans. If applicable, any other areas unique to the contract or that cannot be captured elsewhere under the Management element will be identified and assessed.

(d) The following adjectival ratings and criteria shall be used when assessing all past performance elements:

(1) *Dark Blue (Exceptional)*. Performance meets contractual requirements and exceeds many to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.

(2) *Purple (Very Good)*. Performance meets contractual requirements and exceeds some to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.

(3) *Green (Satisfactory)*. Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.

(4) *Yellow (Marginal)*. Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.

(5) *Red (Unsatisfactory)*. Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.

## SECTION I Contract Clauses

## CLAUSES INCORPORATED BY REFERENCE:

52.202-1	Definitions	DEC 2001
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	JUL 1995
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 1997
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	JUL 1995
52.211-5	Material Requirements	AUG 2000
52.211-15	Defense Priority And Allocation Requirements	SEP 1990
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.219-8	Utilization of Small Business Concerns	OCT 2000
52.219-9 Alt II	Small Business Subcontracting Plan (Jan 2002) Alternate II	OCT 2001
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.222-19	Child Labor--Cooperation with Authorities and Remedies	SEP 2002
52.222-20	Walsh-Healy Public Contracts Act	DEC 1996
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001
52.223-6	Drug Free Workplace	MAY 2001
52.223-14	Toxic Chemical Release Reporting	OCT 2000
52.225-13	Restrictions on Certain Foreign Purchases	JUL 2000
52.227-1	Authorization and Consent	JUL 1995
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.229-3	Federal, State And Local Taxes	JAN 1991
52.229-5	Taxes--Contracts Performed In U S Possessions Or Puerto Rico	APR 1984
52.230-2	Cost Accounting Standards	APR 1998
52.230-6	Administration of Cost Accounting Standards	NOV 1999
52.232-1	Payments	APR 1984
52.232-8	Discounts For Prompt Payment	FEB 2002
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-11	Extras	APR 1984
52.232-17	Interest	JUN 1996
52.232-23	Assignment Of Claims	JAN 1986
52.232-23 Alt I	Assignment of Claims (Jan 1986) - Alternate I	APR 1984
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	MAY 1999

52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.242-13	Bankruptcy	JUL 1995
52.243-1	Changes--Fixed Price	AUG 1987
52.246-24 Alt I	Limitation Of Liability--High Value Items (Feb 1997) - Alternate I	APR 1984
52.249-2	Termination For Convenience Of The Government (Fixed-Price)	SEP 1996
52.249-8	Default (Fixed-Price Supply & Service)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense- Contract-Related Felonies	MAR 1999
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7002	Payment For Subline Items Not Separately Priced	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004	Required Central Contractor Registration	NOV 2001
252.205-7000	Provisions Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7000	Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate Range Nuclear Forces (INF) Treaty	NOV 1995
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)	APR 1996
252.225-7002	Qualifying Country Sources As Subcontractors	DEC 1991
252.225-7007	Buy American Act--Trade Agreements--Balance of Payments Program	OCT 2002
252.225-7009	Duty-Free Entry--Qualifying Country Supplies (End Products and Components)	AUG 2000
252.225-7012	Preference For Certain Domestic Commodities	APR 2002
252.225-7026	Reporting Of Contract Performance Outside The United States	JUN 2000
252.225-7031	Secondary Arab Boycott Of Israel	JUN 1992
252.225-7037	Duty Free Entry--Eligible End Products	AUG 2000
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises-DoD Contracts	SEP 2001
252.231-7000	Supplemental Cost Principles	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	MAR 2000
252.247-7023	Transportation of Supplies by Sea	MAY 2002

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.209-3 FIRST ARTICLE APPROVAL--CONTRACTOR TESTING (SEP 1989)

(Contracting Officer shall insert details)

(a) The Contractor shall test one unit(s) of Lot/Item 0008 and 0010 as specified in this contract. At least 45 calendar days before the beginning of first article tests, the Contractor shall notify the Contracting Officer, in writing, of the time and location of the testing so that the Government may witness the tests.

(b) The Contractor shall submit the first article test report within 45 calendar days from the date of this contract to Carderock Division, Naval Surface Warfare Center, Philadelphia, Code 3351, 5001 S. Broad St., Philadelphia, PA 19112-1403 marked "FIRST ARTICLE TEST REPORT: Contract No. to be provided prior to award, Lot/Item No. " Within 60 calendar days after the Government receives the test report, the Contracting Officer shall notify the

Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall repeat any or all first article tests. After each request for additional tests, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional tests following a disapproval. The Contractor shall then conduct the tests and deliver another report to the Government under the terms and conditions and within the time specified by the Government. The Government shall take action on this report within the time specified in paragraph (b) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule, or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article report on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, and if the approved first article is not consumed or destroyed in testing, the Contractor may deliver the approved first article as part of the contract quantity if it meets all contract requirements for acceptance.

(f) If the Government does not act within the time specified in paragraph (b) or (c) above, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for (1) progress payments, or (2) termination settlements if the contract is terminated for the convenience of the Government.

(h) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the offeror/contractor and have been accepted by the Government. The offeror/contractor may request a waiver.

(End of clause)

#### 52.209-4 FIRST ARTICLE APPROVAL--GOVERNMENT TESTING (SEP 1989)

(Contracting Officer shall insert details)

(a) The Contractor shall deliver **one** unit(s) of Item **0013** within **90** calendar days from the date of this contract to the Government at (to be provided at time of award) for first article tests. The shipping documentation shall contain this contract number and the Lot/Item identification. The characteristics that the first article must meet and the testing requirements are specified elsewhere in this contract.

(b) Within eight months after the Government receives the first article, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval.

(c) If the first article is disapproved, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor,

including any and all costs for additional tests following a disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time limit specified in paragraph (b) of this clause. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, the Contractor--

(1) May deliver the approved first article as a part of the contract quantity, provided it meets all contract requirements for acceptance and was not consumed or destroyed in testing; and

(2) Shall remove and dispose of any first article from the Government test facility at the Contractor's expense.

(f) If the Government does not act within the time specified in paragraphs (b) or (c) of this clause, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the first article during any first article test.

(h) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for (1) progress payments, or (2) termination settlements if the contract is terminated for the convenience of the Government.

(i) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the Offeror/Contractor and have been accepted by the Government. The Offeror/Contractor may request a waiver.

(End of clause)

#### 52.216-18 ORDERING. (OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from **date of award** through **1827 days after date of contract**.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

(End of clause)

#### 52.216-19 ORDER LIMITATIONS. (OCT 1995)

(a) Minimum order. The contractor will not be obligated to honor an order that provides for the furnishing of less than a combined quantity of 35 EVO Assemblies covered by Items 0001 through 0006.

(b) Maximum order. There is no maximum ordering quantity.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within **N/A** days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of clause)

#### 52.216-21 REQUIREMENTS (OCT 1995)

(a) This is a requirements contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies or services specified in the Schedule are estimates only and are not purchased by this contract. Except as this contract may otherwise provide, if the Government's requirements do not result in orders in the quantities described as "estimated" or "maximum" in the Schedule, that fact shall not constitute the basis for an equitable price adjustment.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. Subject to any limitations in the Order Limitations clause or elsewhere in this contract, the Contractor shall furnish to the Government all supplies or services specified in the Schedule and called for by orders issued in accordance with the Ordering clause. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(c) Except as this contract otherwise provides, the Government shall order from the Contractor all the supplies or services specified in the Schedule that are required to be purchased by the Government activity or activities specified in the Schedule.

(d) The Government is not required to purchase from the Contractor requirements in excess of any limit on total orders under this contract.

(e) If the Government urgently requires delivery of any quantity of an item before the earliest date that delivery may be specified under this contract, and if the Contractor will not accept an order providing for the accelerated delivery, the Government may acquire the urgently required goods or services from another source.

(f) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after **1927 days after date of contract**.

(End of clause)

#### 52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 1999)

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) Evaluation preference. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except--

- (i) Offers from HUBZone small business concerns that have not waived the evaluation preference;
- (ii) Otherwise successful offers from small business concerns;
- (iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and
- (iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer.

These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

\_\_\_ Offeror elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants.

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

#### **52.232-25 -- Prompt Payment (Feb 2002)**

Notwithstanding any other payment clause in this contract, the Government will make invoice payments under the terms and conditions specified in this clause. The Government considers payment as being made on the day a check

is dated or the date of an electronic funds transfer (EFT). Definitions of pertinent terms are set forth in sections 2.101, 32.001, and 32.902 of the Federal Acquisition Regulation. All days referred to in this clause are calendar days, unless otherwise specified. (However, see subparagraph (a)(4) of this clause concerning payments due on Saturdays, Sundays, and legal holidays.)

(a) *Invoice payments --*

(1) *Due date.*

(i) Except as indicated in paragraphs (a)(2) and (c) of this clause, the due date for making invoice payments by the designated payment office shall be the later of the following two events:

(A) The 30th day after the designated billing office receives a proper invoice from the Contractor (except as provided in paragraph (a)(1)(ii) of this clause).

(B) The 30th day after Government acceptance of supplies delivered or services performed. For a final invoice, when the payment amount is subject to contract settlement actions, acceptance is deemed to occur on the effective date of the contract settlement.

(ii) If the designated billing office fails to annotate the invoice with the actual date of receipt at the time of receipt, the invoice payment due date is the 30th day after the date of the Contractor's invoice; provided the designated billing office receives a proper invoice and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(2) *Certain food products and other payments.*

(i) Due dates on Contractor invoices for meat, meat food products, or fish; perishable agricultural commodities; and dairy products, edible fats or oils, and food products prepared from edible fats or oils are --

(A) For meat or meat food products, as defined in section 2(a)(3) of the Packers and Stockyard Act of 1921 (7 U.S.C. 182(3)), and as further defined in Pub. L. 98-181, including any edible fresh or frozen poultry meat, any perishable poultry meat food product, fresh eggs, and any perishable egg product, as close as possible to, but not later than, the 7th day after product delivery.

(B) For fresh or frozen fish, as defined in section 204(3) of the Fish and Seafood Promotion Act of 1986 (16 U.S.C. 4003(3)), as close as possible to, but not later than, the 7th day after product delivery.

(C) For perishable agricultural commodities, as defined in section 1(4) of the Perishable Agricultural Commodities Act of 1930 (7 U.S.C. 499a(4)), as close as possible to, but not later than, the 10th day after product delivery, unless another date is specified in the contract.

(D) For dairy products, as defined in section 111(e) of the Dairy Production Stabilization Act of 1983 (7 U.S.C. 4502(e)), edible fats or oils, and food products prepared from edible fats or oils, as close as possible to, but not later than, the 10th day after the date on which a proper invoice has been received. Liquid milk, cheese, certain processed cheese products, butter, yogurt, ice cream, mayonnaise, salad dressings, and other similar products, fall within this classification. Nothing in the Act limits this classification to refrigerated products. When questions arise regarding the proper classification of a specific product, prevailing industry practices will be followed in specifying a contract payment due date. The burden of proof that a classification of a specific product is, in fact, prevailing industry practice is upon the Contractor making the representation.

(ii) If the contract does not require submission of an invoice for payment (*e.g.*, periodic lease payments), the due date will be as specified in the contract.

(3) *Contractor's invoice.* The Contractor shall prepare and submit invoices to the designated billing office specified in the contract. A proper invoice must include the items listed in paragraphs (a)(3)(i) through (a)(3)(x) of this clause. If the invoice does not comply with these requirements, the designated billing office will return it within 7 days after receipt (3 days for meat, meat food products, or fish; 5 days for perishable agricultural commodities, dairy products, edible fats or oils, and food products prepared from edible fats or oils), with the reasons why it is not a proper invoice. The Government will take into account untimely notification when computing any interest penalty owed the Contractor.

(i) Name and address of the Contractor.

(ii) Invoice date and invoice number. (The Contractor should date invoices as close as possible to the date of the mailing or transmission.)

- (iii) Contract number or other authorization for supplies delivered or services performed (including order number and contract line item number).
  - (iv) Description, quantity, unit of measure, unit price, and extended price of supplies delivered or services performed.
  - (v) Shipping and payment terms (*e.g.*, shipment number and date of shipment, discount for prompt payment terms). Bill of lading number and weight of shipment will be shown for shipments on Government bills of lading.
  - (vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the contract or in a proper notice of assignment).
  - (vii) Name (where practicable), title, phone number, and mailing address of person to notify in the event of a defective invoice.
  - (viii) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.
  - (ix) Electronic funds transfer (EFT) banking information.
    - (A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.
    - (B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision (*e.g.*, 52.232-38, Submission of Electronic Funds Transfer Information with Offer), contract clause (*e.g.*, 52.232-33, Payment by Electronic funds Transfer-Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.
    - (C) EFT banking information is not required if the Government waived the requirement to pay by EFT.
  - (x) Any other information or documentation required by the contract (*e.g.*, evidence of shipment.)
- (4) *Interest penalty.* The designated payment office will pay an interest penalty automatically, without request from the Contractor, if payment is not made by the due date and the conditions listed in paragraphs (a)(4)(i) through (a)(4)(iii) of this clause are met, if applicable. However, when the due date falls on a Saturday, Sunday, or legal holiday, the designated payment office may make payment on the following working day without incurring a late payment interest penalty.
- (i) The designated billing office received a proper invoice.
  - (ii) The Government processed a receiving report or other Government documentation authorizing payment, and there was no disagreement over quantity, quality, or Contractor compliance with any contract term or condition.
  - (iii) In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further contract settlement actions between the Government and the Contractor.
- (5) *Computing penalty amount.* The Government will compute the interest penalty in accordance with Office of Management and Budget prompt payment regulations at 5 CFR part 1315.
- (i) For the sole purpose of computing an interest penalty that might be due the Contractor, Government acceptance is deemed to occur constructively on the 7<sup>th</sup> day (unless otherwise specified in this contract) after the Contractor delivers the supplies or performs the services in accordance with the terms and conditions of the contract, unless there is a disagreement over quantity, quality, or Contractor compliance with a contract provision. If actual acceptance occurs within the constructive acceptance period, the Government will base the determination of an interest penalty on the actual date of acceptance. The constructive acceptance requirement does not, however, compel Government officials to accept supplies or services, perform contract administration functions, or make payment prior to fulfilling their responsibilities.
  - (ii) The prompt payment regulations at 5 CFR 1315.10(c) do not require the Government to pay interest penalties if payment delays are due to disagreement between the Government and the Contractor over the payment amount or other issues involving contract compliance, or on amounts temporarily withheld or retained in accordance with the terms of the contract. The Government and the Contractor shall resolve claims involving disputes and any interest that may be payable in accordance with the clause at FAR 52.233-1, Disputes.

(6) *Discounts for prompt payment.* The designated payment office will pay an interest penalty automatically, without request from the Contractor, if the Government takes a discount for prompt payment improperly. The Government will calculate the interest penalty in accordance with the prompt payment regulations at 5 CFR part 1315.

(7) *Additional interest penalty.*

(i) The designated payment office will pay a penalty amount, calculated in accordance with the prompt payment regulations at 5 CFR part 1315 in addition to the interest penalty amount only if--

(A) The Government owes an interest penalty of \$1 or more;

(B) The designated payment office does not pay the interest penalty within 10 days after the date the invoice amount is paid; and

(C) The Contractor makes a written demand to the designated payment office for additional penalty payment, in accordance with paragraph (a)(7)(ii) of this clause, postmarked not later than 40 days after the invoice amount is paid.

(ii)

(A) The Contractor shall support written demands for additional penalty payments with the following data. The Government will not request any additional data. The Contractor shall --

(1) Specifically assert that late payment interest is due under a specific invoice, and request payment of all overdue late payment interest penalty and such additional penalty as may be required;

(2) Attach a copy of the invoice on which the unpaid late payment interest was due; and

(3) State that payment of the principal has been received, including the date of receipt.

(B) If there is no postmark or the postmark is illegible--

(1) The designated payment office that receives the demand will annotate it with the date of receipt, provided the demand is received on or before the 40th day after payment was made; or

(2) If the designated payment office fails to make the required annotation, the Government will determine the demand's validity based on the date the Contractor has placed on the demand; provided such date is no later than the 40th day after payment was made.

(iii) The additional penalty does not apply to payments regulated by other Government regulations (e.g., payments under utility contracts subject to tariffs and regulation).

(b) *Contract financing payments.* If this contract provides for contract financing, the Government will make contract financing payments in accordance with the applicable contract financing clause.

(c) *Fast payment procedure due dates.* If this contract contains the clause at 52.213-1, Fast Payment Procedure, payments will be made within 15 days after the date of receipt of the invoice.

(d) *Overpayments.* If the Contractor becomes aware of a duplicate payment or that the Government has otherwise overpaid on an invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(End of Clause)

## 52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (MAY 2002)

(a) Definitions. As used this clause--

"Commercial item", has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract", includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)(1) The Contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (OCT 2000) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (APR 2002) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (DEC 2001) (38 U.S.C. 4212(a)).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (JUN 2000) (46 U.S.C. Appx 1241) (flowdown not required for subcontracts awarded beginning May 1, 1996).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

52.248-1 VALUE ENGINEERING (FEB 2000)

(a) General. The Contractor is encouraged to develop, prepare, and submit value engineering change proposals (VECP's) voluntarily. The Contractor shall share in any net acquisition savings realized from accepted VECP's, in accordance with the incentive sharing rates in paragraph (f) below.

(b) Definitions. "Acquisition savings," as used in this clause, means savings resulting from the application of a VECP to contracts awarded by the same contracting office or its successor for essentially the same unit. Acquisition savings include--

(1) Instant contract savings, which are the net cost reductions on this, the instant contract, and which are equal to the instant unit cost reduction multiplied by the number of instant contract units affected by the VECP, less the Contractor's allowable development and implementation costs;

(2) Concurrent contract savings, which are net reductions in the prices of other contracts that are definitized and ongoing at the time the VECP is accepted; and

(3) Future contract savings, which are the product of the future unit cost reduction multiplied by the number of future contract units in the sharing base. On an instant contract, future contract savings include savings on increases in quantities after VECP acceptance that are due to contract modifications, exercise of options, additional orders, and funding of subsequent year requirements on a multiyear contract.

"Collateral costs," as used in this clause, means agency cost of operation, maintenance, logistic support, or Government-furnished property.

"Collateral savings," as used in this clause, means those measurable net reductions resulting from a VECP in the agency's overall projected collateral costs, exclusive of acquisition savings, whether or not the acquisition cost changes.

"Contracting office" includes any contracting office that the acquisition is transferred to, such as another branch of the agency or another agency's office that is performing a joint acquisition action.

"Contractor's development and implementation costs," as used in this clause, means those costs the Contractor incurs on a VECP specifically in developing, testing, preparing, and submitting the VECP, as well as those costs the Contractor incurs to make the contractual changes required by Government acceptance of a VECP.

"Future unit cost reduction," as used in this clause, means the instant unit cost reduction adjusted as the Contracting Officer considers necessary for projected learning or changes in quantity during the sharing period. It is calculated at the time the VECP is accepted and applies either (1) throughout the sharing period, unless the Contracting Officer decides that recalculation is necessary because conditions are significantly different from those previously anticipated or (2) to the calculation of a lump-sum payment, which cannot later be revised.

"Government costs," as used in this clause, means those agency costs that result directly from developing and implementing the VECP, such as any net increases in the cost of testing, operations, maintenance, and logistics support. The term does not include the normal administrative costs of processing the VECP or any increase in this contract's cost or price resulting from negative instant contract savings.

"Instant contract," as used in this clause, means this contract, under which the VECP is submitted. It does not include increases in quantities after acceptance of the VECP that are due to contract modifications, exercise of options, or additional orders. If this is a multiyear contract, the term does not include quantities funded after VECP acceptance. If this contract is a fixed-price contract with prospective price redetermination, the term refers to the period for which firm prices have been established.

"Instant unit cost reduction" means the amount of the decrease in unit cost of performance (without deducting any Contractor's development or implementation costs) resulting from using the VECP on this, the instant contract. If this is a service contract, the instant unit cost reduction is normally equal to the number of hours per line-item task saved by using the VECP on this contract, multiplied by the appropriate contract labor rate.

"Negative instant contract savings" means the increase in the cost or price of this contract when the acceptance of a VECP results in an excess of the Contractor's allowable development and implementation costs over the product of the instant unit cost reduction multiplied by the number of instant contract units affected.

"Net acquisition savings" means total acquisition savings, including instant, concurrent, and future contract savings, less Government costs.

"Sharing base," as used in this clause, means the number of affected end items on contracts of the contracting office accepting the VECP.

Sharing period, as used in this clause, means the period beginning with acceptance of the first unit incorporating the VECP and ending at a calendar date or event determined by the contracting officer for each VECP.

"Unit," as used in this clause, means the item or task to which the Contracting Officer and the Contractor agree the VECP applies.

"Value engineering change proposal (VECP)" means a proposal that--

(1) Requires a change to this, the instant contract, to implement; and

(2) Results in reducing the overall projected cost to the agency without impairing essential functions or characteristics; provided, that it does not involve a change--

(i) In deliverable end item quantities only;

(ii) In research and development (R&D) end items or R&D test quantities that is due solely to results of previous testing under this contract; or

(iii) To the contract type only.

(c) VECP preparation. As a minimum, the Contractor shall include in each VECP the information described in subparagraphs (1) through (8) below. If the proposed change is affected by contractually required configuration management or similar procedures, the instructions in those procedures relating to format, identification, and priority assignment shall govern VECP preparation. The VECP shall include the following:

(1) A description of the difference between the existing contract requirement and the proposed requirement, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, the effect of the change on the end item's performance, and any pertinent objective test data.

(2) A list and analysis of the contract requirements that must be changed if the VECP is accepted, including any suggested specification revisions.

(3) Identification of the unit to which the VECP applies.

(4) A separate, detailed cost estimate for (i) the affected portions of the existing contract requirement and (ii) the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable development and implementation costs, including any amount attributable to subcontracts under the Subcontracts paragraph of this clause, below.

(5) A description and estimate of costs the Government may incur in implementing the VECP, such as test and evaluation and operating and support costs.

(6) A prediction of any effects the proposed change would have on collateral costs to the agency.

(7) A statement of the time by which a contract modification accepting the VECP must be issued in order to achieve the maximum cost reduction, noting any effect on the contract completion time or delivery schedule.

(8) Identification of any previous submissions of the VECP, including the dates submitted, the agencies and contract numbers involved, and previous Government actions, if known.

(d) Submission. The Contractor shall submit VECP's to the Contracting Officer, unless this contract states otherwise. If this contract is administered by other than the contracting office, the Contractor shall submit a copy of the VECP simultaneously to the Contracting Officer and to the Administrative Contracting Officer.

(e) Government action. (1) The Contracting Officer will notify the Contractor of the status of the VECP within 45 calendar days after the contracting office receives it. If additional time is required, the Contracting Officer will notify the Contractor within the 45-day period and provide the reason for the delay and the expected date of the decision. The Government will process VECP's expeditiously; however, it shall not be liable for any delay in acting upon a VECP.

(2) If the VECP is not accepted, the Contracting Officer will notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by the Government. The Contracting Officer may require that the Contractor provide written notification before undertaking significant expenditures for VECP effort.

(3) Any VECP may be accepted, in whole or in part, by the Contracting Officer's award of a modification to this contract citing this clause and made either before or within a reasonable time after contract performance is completed. Until such a contract modification applies a VECP to this contract, the Contractor shall perform in accordance with the existing contract. The decision to accept or reject all or part of any VECP is a unilateral decision made solely at the discretion of the Contracting Officer.

(f) Sharing rates. If a VECP is accepted, the Contractor shall share in net acquisition savings according to the percentages shown in the table below. The percentage paid the Contractor depends upon (1) this contract's type

(fixed-price, incentive, or cost-reimbursement), (2) the sharing arrangement specified in paragraph (a) above (incentive, program requirement, or a combination as delineated in the Schedule), and (3) the source of the savings (the instant contract, or concurrent and future contracts), as follows:

### CONTRACTOR'S SHARE OF NET ACQUISITION SAVINGS

(Figures in percent)

Contract Type	Incentive (Voluntary)		Program Requirement (Mandatory)	
	Instant Contract Rate	Concurrent and Future Contract Rate	Instant Contract Rate	Concurrent and Future Contract Rate
Fixed-price (includes fixed-price-award-fee; excludes other fixed-price incentive contracts)	(1) 50	(1) 50	(1) 25	25
Incentive (fixed-price or cost) (other than award fee)	(2)	(1) 50	(2)	25
Cost-reimbursement (includes cost-plus-award-fee; excludes other cost-type incentive Contracts)	(3) 25	(3) 25	15	15

(1) The Contracting Officer may increase the Contractor's sharing rate to as high as 75 percent for each VECP.

(2) Same sharing arrangement as the contract's profit or fee adjustment formula.

(3) The Contracting Officer may increase the Contractor's sharing rate to as high as 50 percent for each VECP.

(g) Calculating net acquisition savings.

(1) Acquisition savings are realized when (i) the cost or price is reduced on the instant contract, (ii) reductions are negotiated in concurrent contracts, (iii) future contracts are awarded, or (iv) agreement is reached on a lump-sum payment for future contract savings (see subparagraph (i)(4) below). Net acquisition savings are first realized, and the Contractor shall be paid a share, when Government costs and any negative instant contract savings have been fully offset against acquisition savings.

(2) Except in incentive contracts, Government costs and any price or cost increases resulting from negative instant contract savings shall be offset against acquisition savings each time such savings are realized until they are fully offset. Then, the Contractor's share is calculated by multiplying net acquisition savings by the appropriate Contractor's percentage sharing rate (see paragraph (f) above). Additional Contractor shares of net acquisition savings shall be paid to the Contractor at the time realized.

(3) If this is an incentive contract, recovery of Government costs on the instant contract shall be deferred and offset against concurrent and future contract savings. The Contractor shall share through the contract incentive structure in savings on the instant contract items affected. Any negative instant contract savings shall be added to the target cost or to the target price and ceiling price, and the amount shall be offset against concurrent and future contract savings.

(4) If the Government does not receive and accept all items on which it paid the Contractor's share, the Contractor shall reimburse the Government for the proportionate share of these payments.

(h) Contract adjustment. The modification accepting the VECP (or a subsequent modification issued as soon as possible after any negotiations are completed) shall--

(1) Reduce the contract price or estimated cost by the amount of instant contract savings, unless this is an incentive contract;

(2) When the amount of instant contract savings is negative, increase the contract price, target price and ceiling price, target cost, or estimated cost by that amount;

(3) Specify the Contractor's dollar share per unit on future contracts, or provide the lump-sum payment;

(4) Specify the amount of any Government costs or negative instant contract savings to be offset in determining net acquisition savings realized from concurrent or future contract savings; and

(5) Provide the Contractor's share of any net acquisition savings under the instant contract in accordance with the following:

(i) Fixed-price contracts--add to contract price.

(ii) Cost-reimbursement contracts--add to contract fee.

(i) Concurrent and future contract savings.

(1) Payments of the Contractor's share of concurrent and future contract savings shall be made by a modification to the instant contract in accordance with subparagraph (h)(5) above. For incentive contracts, shares shall be added as a separate firm-fixed-price line item on the instant contract. The Contractor shall maintain records adequate to identify the first delivered unit for 3 years after final payment under this contract.

(2) The Contracting Officer shall calculate the Contractor's share of concurrent contract savings by (i) subtracting from the reduction in price negotiated on the concurrent contract any Government costs or negative instant contract savings not yet offset and (ii) multiplying the result by the Contractor's sharing rate.

(3) The Contracting Officer shall calculate the Contractor's share of future contract savings by (i) multiplying the future unit cost reduction by the number of future contract units scheduled for delivery during the sharing period, (ii) subtracting any Government costs or negative instant contract savings not yet offset, and (iii) multiplying the result by the Contractor's sharing rate.

(4) When the Government wishes and the Contractor agrees, the Contractor's share of future contract savings may be paid in a single lump sum rather than in a series of payments over time as future contracts are awarded. Under this alternate procedure, the future contract savings may be calculated when the VECP is accepted, on the basis of the Contracting Officer's forecast of the number of units that will be delivered during the sharing period. The Contractor's share shall be included in a modification to this contract (see subparagraph (h)(3) above) and shall not be subject to subsequent adjustment.

(5) Alternate no-cost settlement method. When, in accordance with subsection 48.104-4 of the Federal Acquisition Regulation, the Government and the Contractor mutually agree to use the no-cost settlement method, the following applies:

(i) The Contractor will keep all the savings on the instant contract and on its concurrent contracts only.

(ii) The Government will keep all the savings resulting from concurrent contracts placed on other sources, savings from all future contracts, and all collateral savings.

(j) Collateral savings. If a VECP is accepted, the Contracting Officer will increase the instant contract amount, as specified in paragraph (h)(5) of this clause, by a rate from 20 to 100 percent, as determined by the Contracting Officer, of any projected collateral savings determined to be realized in a typical year of use after subtracting any Government costs not previously offset. However, the Contractor's share of collateral savings will not exceed the contract's firm-fixed-price, target price, target cost, or estimated cost, at the time the VECP is accepted, or \$100,000, whichever is greater. The Contracting Officer will be the sole determiner of the amount of collateral savings.

(k) Relationship to other incentives. Only those benefits of an accepted VECP not rewardable under performance, design-to-cost (production unit cost, operating and support costs, reliability and maintainability), or similar incentives shall be rewarded under this clause. However, the targets of such incentives affected by the VECP shall not be adjusted because of VECP acceptance. If this contract specifies targets but provides no incentive to surpass them, the value engineering sharing shall apply only to the amount of achievement better than target.

(l) Subcontracts. The Contractor shall include an appropriate value engineering clause in any subcontract of \$100,000 or more and may include one in subcontracts of lesser value. In calculating any adjustment in this contract's price for instant contract savings (or negative instant contract savings), the Contractor's allowable development and implementation costs shall include any subcontractor's allowable development and implementation costs, and any value engineering incentive payments to a subcontractor, clearly resulting from a VECP accepted by the Government under this contract. The Contractor may choose any arrangement for subcontractor value engineering incentive payments; provided, that the payments shall not reduce the Government's share of concurrent or future contract savings or collateral savings.

(m) Data. The Contractor may restrict the Government's right to use any part of a VECP or the supporting data by marking the following legend on the affected parts:

"These data, furnished under the Value Engineering clause of contract . . . . . , shall not be disclosed outside the Government or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the clause. This restriction does not limit the Government's right to use information contained in these data if it has been obtained or is otherwise available from the Contractor or from another source without limitations."

If a VECP is accepted, the Contractor hereby grants the Government unlimited rights in the VECP and supporting data, except that, with respect to data qualifying and submitted as limited rights technical data, the Government shall have the rights specified in the contract modification implementing the VECP and shall appropriately mark the data. (The terms "unlimited rights" and "limited rights" are defined in Part 27 of the Federal Acquisition Regulation.)

(End of clause)

#### 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www.legal.gsa.gov> or <http://www.dtc.mil/dfars>

#### CAR-I10 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (JUN 1996) (NSWCCD)

(a) Except as specified in paragraph (b) below, no order, statement, or conduct of Government personnel who visit the Contractor's facilities or in any other manner communicates with Contractor personnel during the performance of this contract shall constitute a change under the "Changes" clause of this contract.

(b) The Contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.

(c) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer's. In the event the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof. The address and telephone number of the Contracting Officer is:

R. Sieger, Code 3351  
Commanding Officer  
Naval Surface Warfare Center  
5001 S. Broad St.  
Philadelphia, PA 19112-1403

SECTION J List of Documents, Exhibits and Other Attachments

Exhibit A – DD Form 1423, Contracts Data Requirement List (12 pages)

Attachment I – NAVSEA Drawing Number 508-4325677

Attachment II – NAVSEA Drawing Number 504-4326478

Attachment III – NAVSEA Drawing Number 508-4325675

Attachment IV – NAVSEA Drawing Number 508-4325674

Attachment V – NAVSEA Drawing Number 504-4326578

Attachment VI – NAVSEA Drawing Number 504-4326344

Exhibits A and Attachments I through VI are provided electronically in PDF format.

## SECTION K Representations, Certifications and Other Statements of Offerors

## CLAUSES INCORPORATED BY REFERENCE:

52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	APR 1991
52.222-38	Compliance with Veterans' Employment Reporting Requirements	DEC 2001
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	MAR 1998

## CLAUSES INCORPORATED BY FULL TEXT

## 52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices,

(ii) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision \_\_\_\_\_ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of provision)

52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. [Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representations, of this solicitation.] The offeror represents that it ( ) is a women-owned business concern.

(End of provision)

52.207-4 ECONOMIC PURCHASE QUANTITY--SUPPLIES (AUG 1987)

(a) Offerors are invited to state an opinion on whether the quantity(ies) of supplies on which bids, proposals or quotes are requested in this solicitation is (are) economically advantageous to the Government.

Each offeror who believes that acquisitions in different quantities would be more advantageous is invited to recommend an economic purchase quantity. If different quantities are recommended, a total and a unit price must be quoted for applicable items. An economic purchase quantity is that quantity at which a significant price break occurs. If there are significant price breaks at different quantity points, this information is desired as well.

OFFEROR RECOMMENDATIONS			
PRICE			
ITEM	QUANTITY	QUOTATION	TOTAL

(c) The information requested in this provision is being solicited to avoid acquisitions in disadvantageous quantities and to assist the Government in developing a data base for future acquisitions of these items. However, the Government reserves the right to amend or cancel the solicitation and resolicit with respect to any individual item in the event quotations received and the Government's requirements indicate that different quantities should be acquired.

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are ( ) are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ( ) have not ( ), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ( ) are not ( ) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ( ) has not ( ), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

#### 52.215-6 PLACE OF PERFORMANCE (OCT 1997)

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, ( ) intends, ( ) does not intend [check applicable block] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

**Place of Performance(Street Address, City, State,  
County, Zip Code)**

**Name and Address of Owner and Operator of the  
Plant or Facility if Other Than Offeror or  
Respondent**

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002) ALTERNATE I (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is **333995** (insert NAICS code).

(2) The small business size standard is **500** (insert size standard).

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it ☐ is, ☐ is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it ☐ is, ☐ is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ☐ is, ☐ is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ☐ is, ☐ is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it ☐ is, ☐ is not a service-disabled veteran-owned small business concern.

(6) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, as part of its offer, that--

(i) It ☐ is, ☐ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ☐ is, ☐ is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: \_\_\_\_\_.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

☐ Black American.

☐ Hispanic American.

☐ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

( ) Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

( ) Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

( ) Individual/concern, other than one of the preceding.

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

Small business concern means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business concern means a small business concern --

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the

preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

- (i) Be punished by imposition of fine, imprisonment, or both;
- (ii) Be subject to administrative remedies, including suspension and debarment; and
- (iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

#### 52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

- (a) ☐ It has, ☐ has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;
- (b) ☐ It has, ☐ has not, filed all required compliance reports; and
- (c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

#### 52.222-25 AFFIRMATIVE ACTION COMPLIANCE (APR 1984)

The offeror represents that

- (a) ☐ it has developed and has on file, ☐ has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or
- (b) ☐ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(End of provision)

#### 52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

- (a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

- (b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons:  
(Check each block that is applicable.)

☐ (i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

☐ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

☐ (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

☐ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

#### 52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (JUN 2000)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

#### I. DISCLOSURE STATEMENT--COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

**CAUTION:** In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

(1) Certificate of Concurrent Submission of Disclosure Statement.

The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows: (i) original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable, and (ii) one copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: \_\_\_\_\_ Name and Address of Cognizant ACO or Federal Official Where Filed: \_\_\_\_\_

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

(2) Certificate of Previously Submitted Disclosure Statement.

The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: \_\_\_\_\_ Name and Address of Cognizant ACO or Federal Official Where Filed: \_\_\_\_\_

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

(3) Certificate of Monetary Exemption.

The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$50 million (of which at least one award exceeded \$1 million) in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) Certificate of Interim Exemption.

The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

CAUTION: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

## II. COST ACCOUNTING STANDARDS--ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

( ) The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

CAUTION: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$25 million or more.

### III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

( ) YES ( ) NO

(End of clause)

#### 252.225-7006 BUY AMERICAN ACT--TRADE AGREEMENTS--BALANCE OF PAYMENTS PROGRAM CERTIFICATE (MAR 1998)

a) Definitions. Caribbean Basin country end product, designated country end product, domestic end product NAFTA country end product, nondesignated country end product, qualifying country end product, and U.S. made end product have the meanings given in the Buy American Act--Trade Agreements--Balance of Payments Program clause of this solicitation.

(b) Evaluation. Offers will be evaluated in accordance with the policies and procedures of Part 225 of the Defense Federal Acquisition Regulation Supplement. Offers of foreign end products that are not U.S. made, qualifying country, designated country, Caribbean Basin country, or NAFTA country end products will not be considered for award, unless the Contracting Officer determines that there are no offers of such end products; or the offers of such end products are insufficient to fulfill the requirements; or a national interest exception to the Trade Agreements Act is granted.

(c) Certifications.

(1) The Offeror certifies that—

(i) Each end product, except the end products listed in paragraph (c)(2) of this provision, is a domestic end product; and

(ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The Offeror must identify all end products that are not domestic end products.

(i) The Offeror certifies that the following supplies qualify as “U.S. made end products” but do not meet the definition of “domestic end product”:

---

(insert line item number)

(ii) The Offeror certifies that the following supplies are qualifying country end products:

---

(insert line item number)

---

(insert country of origin)

(iii) The Offeror certifies that the following supplies qualify as designated country end products:

\_\_\_\_\_  
(insert line item number)

\_\_\_\_\_  
(insert country of origin)

(iv) The Offeror certifies that the following supplies qualify as Caribbean Basin country end products:

\_\_\_\_\_  
(insert line item number)

\_\_\_\_\_  
(insert country of origin)

(v) The Offeror certifies that the following supplies qualify as NAFTA country end products:

\_\_\_\_\_  
(insert line item number)

\_\_\_\_\_  
(insert country of origin)

(vi) The following supplies are other nondesignated country end products.

-----  
Insert line item number      Insert country of origin  
-----

-----  
(End of clause)

252.247-7022    REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

\_\_\_\_ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

\_\_\_\_ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

CAR-K01 ELECTRONIC DISTRIBUTION OF CONTRACT DOCUMENTS (NOV 2000)

(a) The Navy Air Force Interface (NAFI) provides World Wide Web access to documents used to support the procurement, contract administration, bill paying, and accounting processes. NAFI is being used by the Naval Surface Warfare Center, Carderock Division to electronically distribute all contract award and contract modification documents, including task and delivery orders. The contractor's copy will be provided in portable document format (pdf) as an attachment to an e-mail that will be sent to the contractor by the NAFI system. A pdf file may be accessed using Adobe Acrobat Reader which is a free software that may be downloaded at <http://www.adobe.com/products/acrobat/readstep.html>.

(b) Offerors must provide the following information that will be used to make electronic distribution for any resultant contract.

Name of Point of Contact \_\_\_\_\_

Phone Number for Point of Contact \_\_\_\_\_

E-mail Address for Receipt of Electronic Distribution \_\_\_\_\_

## SECTION L Instructions, Conditions and Notices to Bidders

## CLAUSES INCORPORATED BY REFERENCE:

52.204-6	Data Universal Numbering System (DUNS) Number	JUN 1999
52.215-1	Instructions to Offerors--Competitive Acquisition	MAY 2001

## CLAUSES INCORPORATED BY FULL TEXT

## 52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be ☐ DX rated order; ☒ DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation. [Contracting Officer check appropriate box.]

(End of provision)

## 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm-fixed price requirements contract resulting from this solicitation.

(End of clause)

## 52.233-2 SERVICE OF PROTEST (AUG 1996)

- (a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from

R. Sieger, Code 3351  
Commanding Officer  
Naval Surface Warfare Center  
5001 S. Broad St.  
Philadelphia, PA 19112-1403

- (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

## 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

[Insert one or more Internet addresses]

**CAR-L02 SINGLE AWARD FOR ALL ITEMS (JUN 1996) (NSWCCD)**

Due to the interrelationship of supplies and/or services to be provided hereunder, the Government reserves the right to make a single award to the low price technically acceptable offeror. Therefore, offerors proposing less than the entire effort specified herein may be determined to be unacceptable.

**CAR-L11 PROPOSAL PREPARATION REQUIREMENT (JUL 2002) (NSWCCD)**

It is requested that offerors prepare their proposals in accordance with the following organization, content and format requirements to assist the government in making a complete and thorough evaluation of all proposals. Proposals shall be submitted as three separate documents, as follows:

Documents	Original	Copies
Solicitation, Offer and Award Document (SF-33)	1	1
Technical Proposal	1	3
Cost Proposal	1	2

The "originals" shall be clearly identified as the "ORIGINAL", and bear the original signature(s) of the offeror. The "copies" shall be complete and clearly identified as "COPY" or "DUPLICATE".

In order to facilitate the evaluation process, it is requested that offerors also submit their cost proposal spreadsheets on diskette (in addition to the hard copy requirements stated above). Diskettes shall be in 3.5 inch, high density format, and it is requested that the spreadsheet files be compatible with Windows 95 Version 4.0, Excel 97 Version 8.0. The provision of these spreadsheet files on diskette in no way relinquishes the offeror's responsibility to provide hard copies of the cost proposal.

**(1) SOLICITATION, OFFER AND AWARD DOCUMENTS (SF-33 RFP)**

This document, which may be used as part of the contract award document, shall be fully executed and returned as a separate document from the technical and cost proposals. Special attention should be taken to accurately enter the prices required in Section B, complete all Representations and Certifications in Section K and ensure that an authorized person signs the offer in Block 17 of Page 1.

The document SHALL NOT be embellished with any cover or binding. If the offeror makes any qualifications to any provisions in the RFP, all such qualifications shall be listed in a cover letter to the proposal. Qualifications may also be annotated on the Solicitation, Offer and Award document, if such annotation is necessary to clarify the qualifications.

**(2) TECHNICAL PROPOSAL**

The Government is to award a firm-fixed price requirements as a result of this solicitation to the responsible lowest price technically acceptable offeror.

The technical proposal should be written so that a thorough evaluation and a sound determination can be made that the offeror has the resources and capability to furnish an Electric Valve Operator (EVO) Assembly that meet all the requirements of this solicitation. To this end, the Technical Proposal shall be specific, detailed and complete so as to clearly and fully demonstrate that the prospective contractor has a thorough understanding of all the technical requirements and the ability to meet them.

Statements such as "the offeror understands," "will comply with the statement of work," "standard procedures will be employed," "well known techniques will be used" and general paraphrasing of the statement of work are considered inadequate. The technical proposal must provide details concerning what the contractor will do and how

it will be done. This includes a full explanation of the techniques, disciplines, and procedures proposed to be followed. The technical proposal shall not contain any reference to price.

The technical proposal shall be page numbered, contain a table of contents, be organized in the following three sections, and shall address in detail the following information:

**Technical Factors:**

**(a) Design**

The offeror shall provide information on the JP-5 System Tank Globe Manifold Valve Electric Valve Operator (EVO) Assemblies it intends to furnish and demonstrate how it will comply with the performance and operational requirements set forth in Section C of the solicitation. This may include preliminary a sketch or drawing of the EVO Assemblies. The offeror shall also address how the design will provide resistance to corrosion failures over the service life span and how the design will provide for minimum degradation of performance due to environmental operating conditions and continuous operation. It shall also demonstrate how the proposed EVO design will permit future implementation of smart valve technology via circuit or “smart” cards for upgrading to a fieldbus controlled system with minimal changes.

**(b) Corporate Experience**

The offeror shall provide information on its experience with the manufacture of same or similar items and on the equipment, facilities and other production resources it possesses that will be used in performance under any resultant contract. The offeror shall also submit information demonstrating that it possesses a quality or inspection system that conforms to a higher level of quality or inspection program, such as International Organization for Standardization (ISO) ANSI/ASQC-Q9000-2000.

**(c) Past Performance**

The offeror shall provide information that will include, but not limited to, relevance and extent of previous contracts, quality and conformance of product/services to the specifications, timely delivery, rework of minor and major components, and customer satisfaction. The information shall be provided from references as well as any other sources that may have relevant information. It is noted that contractor references that cannot be contacted will not be considered. Also an offer with no relevant past performance history with a government must provide some justification for establishing credibility that claims of future performance are sound.

Each offeror has the opportunity to provide in its proposal any information regarding its past performance of contracts similar to the Government's requirement that it would like the Government to consider. Such information may be in the nature of additional information to that which the Government has readily available, or which has already been rated under the CPARS system, or which the offeror considers essential to the Government's evaluation or explanatory information of substandard or poor performance and the corrective actions taken to prevent a recurrence. The Government reserves the right to verify statements and representations made in an offeror's proposal.

To assist the Navy in performance the past performance evaluation defined above, the offeror shall provide a synopsis of at least three previous contracts which involved similar or related work performed (or currently performing) in the last three (3) years. The offeror may identify Federal, State and Local Government and private contracts that are similar to the statement of work for ongoing contracts or contracts completed in the past five years.

For each contract, the contractor shall provide a narrative discussion of work performed and list that provides the following instructions:

1. Contract Number
2. Customer/Agency
3. Contracting Officer and Technical Point of Contact (names and phone numbers)
4. Brief Description of Scope of Work
5. Contract Type
6. Award Price
7. Total Labor-Hours of Effort
8. Period of Performance
9. Contract Deliverables

Incomplete data may not be considered.

## SECTION M Evaluation Factors for Award

## CLAUSES INCORPORATED BY FULL TEXT

## CAR-M02 AGENCY SPECIFIC PROVISION - EVALUATION OF PROPOSALS (AUG 1999) (NSWCCD)

(a) **General.** Careful, full and impartial consideration will be given to all offers received pursuant to this solicitation, and the evaluation will be applied in a similar manner. Factors against which offers will be evaluated are set forth below and parallel the solicitation response called for elsewhere herein.

(b) **Initial Evaluation of Offers.** An evaluation plan has been established to evaluate offers pursuant to the factors set forth in (f) below and all offers received will be evaluated by a team of Government personnel in accordance with the plan.

(c) **Evaluation Approach.** The following evaluation approach will be used:

(1) *Technical Proposal.* The evaluators will prepare a narrative reflecting the results of their evaluation and all factors other than price will be combined into a rating of either acceptable, unacceptable but susceptible of being made acceptable, or unacceptable.

(2) *Price Proposal.* Price will not be scored, numerically weighted, or combined with the technical evaluation factors. The price evaluation will consist of a comparison of the proposed prices contained in the offers received in response to the solicitation.

Proposals which are unrealistic in terms of technical or schedule commitments or unrealistically high or low in price may be deemed reflective of an inherent lack of technical competence, or indicative of a failure to comprehend the cost of the materials and labor required to produce the item to be furnished, may be grounds for rejection of the proposal. Subjective judgement on the part of the Government evaluators is implicit in the entire process. Throughout the evaluation, the Government will consider "correction potential" when a deficiency is identified.

(d) **Competitive Acquisition Instructions.**

(1) If the provision FAR 52.215-1, "Instructions To Offerors--Competitive Acquisition" is included in Section L of this solicitation, the Government intends to evaluate proposals and award a contract without discussions with offerors (except clarifications as described in FAR 15.306(a)). Therefore, the offeror's initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. However, the Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary.

(2) If the provision at FAR 52.215-1 is used with its Alternate I, the Government intends to evaluate proposals and award a contract after conducting discussions with offerors whose proposals have been determined to be in the competitive range.

(3) In either of the above two situations, if the Contracting Officer determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the Contracting Officer may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

(e) **Discussion/Final Proposal Revisions.** The Contracting Officer shall indicate to, or discuss with, each offeror still being considered for award, significant weaknesses, deficiencies, and other aspects of its proposal (such as price, design, corporate experience, past performance, and terms and conditions) that could, in the opinion of the Contracting Officer, be altered or explained to enhance materially the proposal's potential for award. The scope and extent of discussions are a matter of Contracting Officer judgment. At the conclusion of discussions, each offeror

still in the competitive range shall be given an opportunity to submit a final proposal revision. A final cut-off date for receipt of final proposal revisions will be established by the Contracting Officer.

- (f) ***Basis for Contract Award***. The basis for award of a contract(s) as a result of this solicitation will be on the basis of the lowest price offered that meets or exceeds the acceptability standards for the technical evaluation factors. The technical evaluation factors that will be used to establish the requirements of technical acceptability are: Design, Corporate Experience and Past Performance. In order for an offeror's technical proposal to receive an overall rating of acceptable, it must be evaluated as acceptable in each of the factors identified above.